sent in in competition by Mr. John Johnstone, Mr. Thomas Oliver, and Mr. Lish, of Newcastle-upon-Tyne, the design by Mr. Lish has been selected; and it is intended, we understand, to proceed with the work at once.

*Newington Parish Church.*—The premiums have been awarded,—to Mr. Fowler, first; Mr. Pearson, second; Mr. Blomfield, third. Messrs. Brooks, Jarvis, and Bignell also sent designs. We shall probably take a look at them.

## SCHOOL BOARDS.

*Canterbury.*—The Board's school is to be altered under the direction of their architect, Mr. J. G. Hall. Messrs. Gaskin & Godden's tender for the execution of the work has been accepted.

*St. Austell.*—At the meeting of this School Board on Saturday, the tender of Mr. J. Body, of St. Austell, was accepted for the carpenters', joiners', smiths', &c., work, and that of Mr. H. Ede for the masons', bricklayers', slaters', &c., for the erection of the Mount Charles Schools. Mr. S. Trevail, of Carne Par Station, from whose designs the schools are to be built, is appointed the architect to superintend the execution of the work: the cost will be under 2*l.* per child.

## LIGHTING THE STAGE.

"IT is interesting," says the *Athenæum*, "to notice, in an architectural contemporary, a statement that the stage of Mr. Fechter's theatre in New York is to be lighted by means of a lime-light fixed in the ceiling of the auditorium, with reflectors, so as to illuminate the stage, not in that preposterously unnatural manner which custom has made less than intolerable, and the effect of which is the reverse of truth, but so that the features, and consequently the expressions, the limbs, and therefore the attitudes, of the performers, will be displayed as they were intended to be displayed, while spectators will be allowed to see the stage without the pain of facing the glare of the footlights. If any of our abler artists would be good enough to exhibit two portraits of the same actor, one of him as he appears in the conventional stage-light, *i. e.*, with his features illuminated from below, and another of him as he appears in the light by which human features were designed to be seen, that painter would serve the cause of true art."

It was a wise remark of Sir James Simpson to the present writer that he was half inclined to think that "there is nothing new but what has been forgotten." We have often occasion, in cases such as this, to recall the origination, or publication, in the *Builder* of past years, of ideas long subsequently put forth as something new; and so it seems to be in this instance. Twenty-five years ago, in our volume for 1847, p. 281, is a letter from Mr. J. E. Dove, in which he gives an account of this very mode of lighting the stage of the Greenock Theatre, invented by him, and executed for the manager under his superintendence. In this letter the writer says:—

"I had often been struck with the classical or picturesque expression thrown over the features of even a very plain and inelegant countenance by the elevation of the artificial light, when alone reflected on it from a point exclusively above its level. Let any one, for instance, place a mirror before his own face, and elevate the candle [now the *lamp*, as candles are scarce now-a-days], as the only light by which it is to be seen, to various levels, higher or lower, before it; and he will at once perceive that as the shadows come to fall exclusively downwards, a classical elegance and even beauty of effect will be shed over even the most rugged countenance. Of course I do not mean that the light be elevated directly above the head, but immediately in front of it, at an angle, probably, of 45 degrees, so that the expression of no feature be lost. . . . .

On the other hand, while in a theatre, and especially in the pit [now orchestra stalls, chiefly], I have frequently been annoyed and disgusted with the effect of the unnatural glare of light from the footlights, particularly on the faces of those on the stage. The false and unnatural effect thus produced every one must have remarked. Why, the very cavernous interior of the nostril of even the most beautiful countenance, which nature discreetly casts into shade, is thus explored with unmerciful, trying, and by no means beautiful distinctness. But I need not further enlarge on those reasons which led me to endeavour to get rid altogether of footlights. . . . . I did realise my idea, and that successfully, and to the satisfaction both of actors and spectators. . . . . The principle consisted in the entire removal of the footlights, and the bold substitution of a central congeries of lights in the very body of the house (a small one certainly), and almost in the place usually occupied by the chandelier, with a reflector sufficiently large and powerful to turn the whole flood of light upon the stage at about an angle of 45 degrees. A second congeries was found necessary, however, at a like elevation, but within the proscenium, or above the general range of the actors' heads, to aid in the proper and uninterrupted display of the scenery on the like principle, the complete design for which display comprehended the systematic use of scenery so illuminated also from behind as to give the dioramic effect as far as possible."

The experiment, it thus seems, was carried out to a sufficient extent to prove not only its practicability, but its great superiority to the usual method of lighting the stage, and to show that nothing else was requisite to the most brilliant realisation of this still striking *novelty* in all its details but the well filled treasury of a metropolitan theatre. The "sun-light" system in halls and churches, we may add, was introduced in Liverpool shortly after the date of this letter, and was obviously based on the idea therein described.

## ARCHITECTS TAKING RETAINERS FROM THE CLERGY.

AT the last sittings of the County Court of Durham, a case interesting to architects was tried. The plaintiff, Mr. J. C. Ebdy, is an architect, of Durham, and the defendant is the Rev. F. Thompson, vicar of the ancient church of St. Giles, of the same city.

The plaintiff gave the following particulars:—"1866, April 16th to May 9th. Making restoration survey of St. Giles's Church, and plans and specifications for restoring the same, at a cost of 1,200*l.*, at 2½ per cent., 30*l.*; paid for excavating foundations, 6s. 6d.; total claim, 30*l.* 6s. 6d."

The plaintiff said that, in April, 1866, the defendant, with whom he had been long acquainted, called at his office and instructed him to make a report of the condition of St. Giles's Church, and also to show by plans how 1,200*l.* could be best spent in the work. He stated that the chancel of the church was not to be included in the work, as it belonged to Earl Vane. He gave a written retainer, and said he (witness) was to look to him for payment. The first paragraph in the retainer was, "Proposed that a professional surveyor be employed to inspect the building and state its fitness for the purpose, and what should be done to make it a proper place of worship for the inhabitants of the parish, and also how 1,200*l.* can best be spent for the purpose." That Mr. Ebdy be employed for this purpose." Signed by Mr. Thompson and Mr. Ebdy. He (the witness) remarked at the time that he did not consider it necessary for the vicar to sign the document, as he would take his word. Before he signed the document the defendant said he (plaintiff) should have to do the work of the rebuilding, and that he would have reduced to writing. A few days after the vicar showed witness a rough report of a survey he had made himself. The defendant did not gave him any report of what he thought was requisite should be done. He merely made some suggestions about the church and the bells. He (witness) attended at the church three times, and was engaged altogether six hours and a half. Defendant was present, and witness's clerk was taking measurements of the church. He made the report and the plans, and gave them to defendant. The plans show the church as it now stands, and what it would be like when restored. One plan shows the different periods of architecture, another shows the building as it now stands, and what it would be like when restored. There are also alternative plans. The defendant made an objection to some of the details of the plans, and they were altered at his request. He said he had consulted some of his brother archæologists, and they would not allow a Norman window in the church to be interfered with. This rendered the alteration in the plans necessary. The plans were sufficient for all practical purposes. Altogether he was engaged thirteen and his clerk eleven days in the preparation of the plans and the report. Witness is a fellow of the Royal Institute of British Architects, and the medium charge for remuneration is 3 guineas a day, and the usual percentage when the work is finished. Some architects charge 5 guineas a day. The charge is modified if the work is not completed. If the work is tendered for by contractors, the charge is 3 per cent. If the work had been carried out he should have charged 5 per cent. Had not sued before for the bill in the expectation that the work would be carried out. Expects it will still be carried out.

By defendant's counsel (Mr. Skidmore).—Had been in practice twelve years. Is not aware whether the defendant has the reputation of knowing something about architecture except reading a paper before the Archæological Society. The defendant said that as witness was a young architect he would explain to me the beautiful proportions of the church; he did not point out to me the various styles of architecture displayed in the building. Would have taken it as an insult had he done so. Only went over the church with defendant out of courtesy. Defendant would never acknowledge the trustees to the church, and refused them admittance. Defendant said he must have been a fool to give witness the document before the Court. Never knew that the committee had refused to adopt the report. The report was addressed to the churchwardens as well as the incumbent, according to the usual custom, as they generally act together. Does not care to prepare plans for the chance of getting a job. It is quite common for these matters to be taken in hand by the clergyman. Professes to bind himself by the rules of the Royal Institute of British Architects, and by the rules of that body he is entitled to all claimed in this demand. Would have been entitled to charge 5 per cent. for the job had he prepared the specifications. Would not have prepared plans like these for a builder, nor would have made the report. For a builder he would have prepared specifications and shown the elevations. Defendant did not say he had presented the report at the meeting of the trustees, and they almost threw them at his head. Witness did say he would abandon the present claim if he could get a guarantee he would be employed when the work was carried out.

Mr. Thomas Oliver, of Sunderland, said he was a Fellow of the Royal Institute of British Architects. He understood the nature of the plaintiff's claim. He should not have charged in the way Mr. Ebdy had done, but by time; and his bill, according to time scale, would have amounted to 40*l.* He did not consider Mr. Ebdy's work came fairly under the scale of 2½ per cent., as he had neither provided sections nor shown the elevations, but these could easily have been prepared from the plans.

By defendant's Counsel.—The value of a report depends upon its accuracy and its skill. Should have expected twenty guineas for such an elaborate report as Mr. Ebdy's. Probably, if Mr. Street had prepared a similar report he would have charged 200 guineas. The value of such documents altogether depended upon the skill and standing of the architect.

The rev. defendant, upon being called, gave a qualified denial as to retaining the plaintiff on his own responsibility. He told him that the nave and the tower were to be built by the trustees of the church property, and if he chose to make a report as to the state of that portion of the church which the trustees had to repair, it would give the plaintiff a little standing with the committee. He made the proposition as an act of kindness to a young man commencing business, but witness never agreed to pay for the report, merely offered his influence to [illegible] him the work. The document before the Co[illegible] was merely a memorandum to submit to [illegible] trustees, and he was at a loss how Mr. Ebdy [illegible] it. At the meeting one of the trustees said [illegible] wondered how he, the vicar of the parish, h[illegible] the impudence to produce any plans. Witn[illegible] read a paper on his church, before the membe[illegible] of the Archæological Society, but was certain [illegible] did not get any information for that paper fro[illegible] Mr. Ebdy's report. The report was perfectly worthless to witness, and he was prevented reading it or producing it before the committee.

Mr. Hodgson C. Fowler, of Durham, architect, said he put a very small value on the report and plans in question. There was nothing grand about them. No sections or elevations or description, showing what they were intended for, and nothing in the report but what could be gathered from any county history. It merely contained a few suggestions for a clergyman or churchwardens. The whole he should have charged for the work would have been five guineas. An older man might charge more. The ground measurements for the plans could have been done in a morning, and all the other work in a couple of days. After a plan has been adopted, the architect makes out complete specifications, so that the different tradesmen can measure off their quantities; and he should say the specifications ought to be done in pencil by the architect, and the other work done by clerks. After the specification had been prepared, the architect would then be entitled to 2½ per cent. Witness would have supplied plans like these free of charge. He had had a great deal to do with churches. Young architects often prepared plans on the chance of getting

work. He had often had letters from clergymen inviting him to make plans, on the terms mentioned by the defendant, and there was nothing unusual in what the defendant had done. He would have been rather glad, under the circumstances, of Mr. Thompson's offer, especially as the work was to be done in his own city.

Cross-examined by Mr. Granger. Has frequently done work on the terms mentioned by the defendant. Heard Mr. Oliver give his evidence, and did not think his estimate of the value of the report and plans a monstrous exaggeration; but Mr. Oliver did not know the church, while witness did. The value of a report depended on the way a building was dealt with. The report was inaccurate and the plans were bad. Should not like to allow one of his clerks to do all the works in preparing sections and elevations. One of the plans could be used; but a larger plan would still be required, and if he had the restoration of the church to carry out, should start the whole thing afresh; in fact, he could have got more information in the course of a single walk round the church from Mr. Thompson himself.

Other evidence *pro* and *con*, but of no importance, was adduced, and defendant's counsel at great length urged that the resolution above referred to was but a private memorandum, and had not been given to the plaintiff as a guarantee for payment or employment. That there was no retainer in point of law, and it had been clearly proved that it was not an uncommon thing for architects to do work on the terms stated by the vicar of St. Giles.

The judge said there were many facts in favour of the plaintiff's demand. The production of the document purporting to be resolutions that a professional architect should be employed, and that such architect should be Mr. Ebdy, was in defendant's handwriting. There was also the performance of the work and the entries of it at the time in the plaintiff's books of account, which showed that the architect expected to be paid by some one for his services. If Mr. Ebdy had merely volunteered to make a report on speculation of getting the work, he thought the plaintiff would not have taken the trouble he did, but merely thrown out a few suggestions. He thought the natural course, if the defendant really wished to get the work for the plaintiff, would have been to have used his influence with the trustees, and if he had succeeded, then to have got full plans, and the strong censure shown by the trustees seemed to show that the incumbent had, without any authority from them, employed an architect to make a report on the church; for surely no one could be offended because a young architect had volunteered to give an opinion. The evidence of the defendant was not clear and decisive on the point urged on his side, or he should have been strongly inclined to have given him a verdict. As the plaintiff had proved many facts and circumstances in his favour, the balance of evidence was on his side. He thought, however, the charge was capable of modification, and he should find for the plaintiff for the sum of 12*l.* and full costs.

The court was crowded with architects and surveyors from all parts of the north.

## TRAFFIC IN OXFORD-STREET.

MR. GREENWELL, the vestry-clerk of St. Marylebone, in his evidence given to the Parliamentary Committee on Metropolitan Tramways now sitting, and who said he represented the frontagers of Oxford-street, occupying property assessed at 112,000*l.* per annum, who had upwards of six millions sterling invested in their businesses and premises, and who included many high-class tradespeople, who were almost unanimously opposed to the proposal to lay a tramway in that thoroughfare, stated that it had been ascertained that a street of less than 48 ft. wide between the curbs could not afford space for two lines of tramway, and allow carriages to pass or to draw up on the sides of the street. There were parts of Oxford-street that were 31 ft. 4 in., 38 ft., and 42 ft. wide respectively. A double line of tramway in Oxford-street would prevent tradespeople from having carriages opposite their doors, which was a necessity of their business. The vehicular traffic of Oxford-street was of a peculiar character, both as regarded the vehicles in motion and having occasion to remain at rest for a time. All sorts of light and heavy carriages were combined in the traffic. On a recent day, for instance, when the state of the weather justified the belief that the traffic was considerably under the average, the following vehicles passed Regent-circus, between 9 a.m. and 6 p.m.:—

| | Going West. | Going East. |
|---|---|---|
| Cabs | 2,480 | 1,979 |
| Carriages | 707 | 751 |
| Omnibuses | 622 | 600 |
| Carts | 657 | 451 |
| Vans | 428 | 246 |
| Waggons | 141 | 231 |

Or 9,302 vehicles taking both directions. At other two points in Oxford-street the numbers were respectively 8,687 and 6,508. In some parts of the street it was not unusual for from ten to twenty carriages to have occasion to stand on the sides of the street, at a short distance from each other. A double tramway was totally incompatible with such a traffic. We are of the same opinion.

## SASH FASTENERS.

IF a perfect sash-fastener be produced, it will not improve the thousands now in use. Here is a cheap and simple security for them:—Take a brass drop keyhole-escutcheon; lay it lengthways on the meeting rail of the bottom sash, so that the drop just touches the end of the lever when fastened; put in the two screws, and the thing is done. You just move the drop to let the lever pass, and push it back when re-fastened. One hand only is required. If the manufacturer would introduce a little enlarged catch-plate, with the movable stop on, it would be desirable; if with a spring, it would be self-acting.

H. F.

## SEWAGE FARMS.

THE statements made by Dr. Letheby, at the Slough Inquiry, in objection to sewage farms, are of such a damaging character, and so opposed to the particulars given by other competent witnesses, that the advocates of sewage irrigation should feel it to be their duty to inquire farther into them. If what Dr. Letheby said be true, much that has been said by others must be false, and *vice versâ*.

## THE SHRINE AT ST. ALBAN'S ABBEY.

THE visitor to St. Alban's Abbey Church last year found on the centre of the floor of the Saint's Chapel, (the extension of the choir eastwards), behind the great altar-screen, a framing of Purbeck marble and an inscribed stone; marking, as he was told, the traditional site of the shrine of St. Alban, the proto-martyr of Britain;—the object erewhile of countless pilgrimages, and of world-wide reputation. The shrine itself had disappeared; but some carved Purbeck marble and some mouldings placed at the end of the chapel, were probably pointed out as fragments, supposed at one time to have been parts of it. In the course of the many, continued explorations undertaken by Dr. Nicholson, the then rector, with the scanty funds at his disposal, the filled-in arches at the east end of the Saint's Chapel seemed likely to repay his investigation. In 1848, the northern of the three arches opening into the eastern aisle or ambulatory (now a public passage-way) was opened out; but with no special results, beyond the discovery of part of a low altar-screen, a painted figure of an archbishop, and of some strongly-coloured surfaces, sprinkled with detached conventional flowers. A few years later the centre arch was cleared, and yielded nearly a score of pieces: and then a temporary halt was made, which came in time to be full fifteen years long. When Mr. G. G. Scott was called on to report (April 5, 1871) as to the works to be forthwith undertaken and desirable in the future, speaking of the arches at the end of the Saint's Chapel, and its aisles, his report stated that,—"These walled-up arches will probably be found to be perfect mines of antiquarian wealth. Some portions of them already partially cleared by Dr. Nicholson yielded a rich return of architectural detail, including a considerable part of the marble substructure of the shrine of St. Alban,—as charming fragments of ancient carving as can well be conceived; and we may hope that the mine is far from being exhausted." The removal of the walling filled in to certain recesses in the south aisle, furnished the first additions to the store previously accumulated, (see page 122 *ante*). From this were obtained solid masses of clunch, cut into groined forms, and panels of the same;—in strictness bits of panels; for, in some, with their longest dimensions under 12 in., twelve pieces, may now be counted. But the arch at the east end of the south aisle, one of those mentioned in the report quoted, proved, on investigation, by far the richest storehouse; hence came, among other things, the Purbeck marble, gabled panels of the sides and ends,—certainly, on art grounds, the richest find of all,—made in the last week in February. The south arch of the Saint's Chapel also contained a length of cornice, &c. To sort the larger of these resurrected pieces, and arrive at the design of each part,—of basement panels, of traceried arcades, of niche divisions: to use shellac dissolved in spirits of wine to fit together morsels almost comminuted; to trace from the form of these portions the obvious general form of the whole shrine; all these fall so well into the likeness of a natural process, in intelligent hands, that it would seem almost superfluous even to hint at them; and perhaps it is also a work of supererogation to add that, with backings of brickwork to give solidity, with roofing-slates cemented in Portland cement at the backs of broken slabs, with temporary wooden struts and similar devices, the shrine is, as might have been expected, growing into shape; is partially groined over, and steadily gathering to itself the stray bits of stone and marble, that must have looked vastly like a rubbish-heap to the eye of the uninitiated.

The very general interest that has been felt and will be maintained with reference to this matter, will warrant some amount of what might otherwise appear rather trivial detail. "Of all the shrines which once adorned our island, there remain but the lower basement of the one at Westminster and a portion of that at Ely;" says Mr. W. Burges in his paper in the "Gleanings from Westminster Abbey," (second edition, 1863, p. 128).

Two steps, each 4 in. high; a substructure, with its plinth 30 in.; open niches, 23 in. to springing of arches; arches, with crocketed gables over, 35 in.; a 7-inch cornice and 4½-inch slab on the top of all; give a total height of 9 ft. from the floor of the church to the top of the masonry of the shrine. Each of the longer sides is in four divisions (2 ft. 0½ in. centres); and the shorter sides (which we will call the ends) in one, subdivided by mullion and sub-arches (1 ft. 6 in. centres). These dimensions will show how the size of the substructure comes to be a parallelogram about 8 ft. 6 in. by 3 ft. 3 in., and how the projection beyond this of the plinth and steps equally on every side calls for an occupied floor space of 12 ft. by 6 ft. 9 in. The relative position of the parts has been determined by placing the tympanum containing the martyrdom at the west end. The Chronicle, speaking of an earlier shrine, states that the then abbot "set it up in a more exalted place, that is to say, above the high altar, in front of the celebrant, that as before his face, so also in his heart, whoever was celebrating mass at the same altar might have the memory of the martyr. And on that account, as an object of the sight of the celebrant, the martyrdom of the same, that is to say, the decollation, is figured." This, whether the original position or not, now fixes those of the other panels, &c., at least of the superstructure, and it is therefore convenient to speak of them by the ordinary methods used as to orientated churches. The longer sides of course run east and west, as indicated by the old marks on the pavement.

The steps are of Purbeck marble; as, indeed, is all the rest of the structure, with the exception of the vaulting of the niches and their panelled divisions above the springing level. Though not all quite complete, there are some fair straight lengths,—in some of the bays with marks of usage; those fixed at the west end being rounded, and the lower step fixed on the north side worn into observable hollows, where the feet of those kneeling on the upper step would have to find their bearings. The substructure has quatrefoils in all divisions, flattened in those at the ends, each foil sub-trefoiled; a delicate moulded cornice, with carved enrichments at intervals, completes this portion; a slab jointed to the back of this cornice starting the superstructure fairly. The two central niches on each side are rectangles, those at the ends are triangles (12 in. deep), the four angle niches of the sides are trapezoids on plan (10 in. wide at back); the including rectangle is thus fully occupied with the ten niches. Cinquefoiled arches, each foil sub-foiled, bunches of foliage over the arches in the tympana of the gables, three sitting figures over the mullions, angels swinging censers at the corners, and the cor-

nice, are the details of the sides. The double arch, with sitting figure over the mullion, the sculptured tympanum over included in the gabled form, censing angels at the corners, and of course the cornice, are repeated at the ends. There are buttresses (fourteen in all) at each division, and double ones at the angles; all standing free but connected to the springings of the arches and to the cornice. The groining is hollowed, as well as the upper portions of the cross partitions of the niches, out of solid stones;—to all appearance in two heights in all cases, making ten stones for all. It is to be regretted that the varied surfaces of the groining interfered with the convenience of form of one of the stones, when wanted time agone for some rough building purpose; and consequently it was scabbled all round; so that, with the exception of just one or two clear enough indications, it is now forced to take its place without its expected form or decoration. The top of all was a single slab, 4¾ in. thick, now cut down into several portions,—one end, 3 ft. 6 in. by 2 ft. 9 in. remaining, and parts of the ornamented sides in scantling. The old inscribed stone that bore the inscription, "S. Albanus, Verolamensis Anglorum, Proto-Martyr, 17 Junii, 297," and, after greatly exercising his mind, was ignominiously reversed by Dr. Nicholson, and was re-inscribed with "Britan: Protomart:" &c., now puts in very fairly a claim to be considered part of this coping stone.

Of the subjects of the carving it is unnecessary to speak in complete detail, and thus prolong a description necessarily tedious. The modelling of the foliage of the cornice is vigorous, and the execution full of spirit; the crockets of the eastern end, with their crumpled and twisted edges are very refined; the bunches in the tympana and the other crockets are of the best art, albeit some of them are a little less decisively handled. These crockets are more thoroughly conventional than the rest of this carving, which is marked by the characteristics of what has been aptly termed "the conventionalism of *approach* to nature." The figure sculpture, though not unpleasing, being thoroughly inoffensive and without distortion, is not of the best class, either in modelling or execution; it is, however, thoroughly subordinated to the general effect, and till something more is exacted, of each separate work, does its part very honestly.

The date of the design may, from its general character, and from the details, be placed with some certainty in the first years of the fourteenth century, when the details of the Geometrical style were in the process of undergoing changes that led to the style we call Decorated.* The eastern end of the church had for many a year been gradually assuming the form visible to the mind's eye in the mutilated, battered, desecrated condition of to-day. From the commencement about 1256 by John of Hertford (Abbot 1235–1260), of works upon the old choir, down to the completion of Lady-chapel at the extreme east in the rule of Hugh Eversden (1301–1326), a sort of regular course and progress seems to have been maintained,—albeit with some intervals of cessation. The erection of a suitable shrine was probably had in view from the very commencement of these works.

As to the method of destruction of the structure; Mr. Smith, the very intelligent mason whose hands have put together all the work as it may now be seen, has concluded from the forms of the fractures where cramps have been torn out;—that the whole was violently overturned by some battering force, and crashing down in a mass, the greater portion at least of the breakages were made at once; that it needed no iconoclastic fury to carry further the destruction that the weight of some of the stones and the form of others sufficiently account for. (For instance, the south side above the springing is almost wholly a single slab of Purbeck, about 8 ft. by 2 ft. 6 in., and only 2 in. thick in the portions between the gables; the north side is different, there being four pieces false jointed behind the figures and vertical mouldings.) No doubt the materials nearest to hand were thrown almost at random into the walls, intended to block the various openings that then laid open what was to become the parish church; being probably carried at once to the builders from the heaps in which they had lain since the destruction. The difference of the light from that for which the shrine was designed may here be noticed; the gigantic altar-screen (erected about 1480), the blocking up of the eastern arches, the watching loft, and Duke Humphrey's monument, are all of much later date.

This discovery is likely, according to all precedent, to afford plentiful opportunity for ingenious speculation, and the amicable controversies of wit and knowledge. As a method of affording information with respect to some details not above mentioned, we subjoin a statement of a few of the points not yet cleared up. They all seemingly stand a better chance of elucidation from analogy or conjecture than from further actual discoveries. . . . . As to the exact nature, form, material, &c., of the upper portion, for which the now-discovered pedestal was only the preparation;—probably, as usual, a "metal or wooden structure covered with plates of gold or silver, enriched with jewels and enamels," doubtless torn to pieces and the most precious portions melted down or dispersed very shortly after the order for destruction had been given;—the knowledge is, for instance, at present very limited. The top slab previously described (4¾ in. thick) has a hole in each angle, and one in the centre of each side; all the six being ¾ in. diameter, and clean cut as for metal; not leaded or otherwise secured, but running well down into the stone. The weight of the roof, no doubt, supplied mooring enough in ordinary times, and these were also dowels to it. Between these larger holes are smaller ones (¼ in.), less deeply cut, but evidently at one time containing some infragile standards. For,—(let us suppose on a violent overturning of the covering),—these metal standards seem to have broken their way out;—to have, in fact, extricated themselves by destroying the front walls of their prisons,—not, of course, to the profit of the delicately-carved band encrusted along the edge of the surmounting slab. . . . The destined purpose of the ten niches so elaborately panelled and canopied has not yet been the subject even of very plausible conjecture. On the sides each is 23 in. wide by 18 in. clear depth, and about 3 ft. high. Statues or groups seem out of the question, as the scale of the sculpture is apparently finally given by the figures only about 14 in. high. Places in which the rich offerings of well-to-do pilgrims could be placed under their own eyes, or even by their own hands, have certainly been here provided in a way to gladden by anticipation the hearts of a community, not ungraciously disregardful of benefactions. Near upon 25 ft. superficial of table area bestrewed even at intervals (of time) with proper objects, may have rendered easier to the building abbots their great indulgence in the delight of "well building," which mainly keeps green their memory to this day: while the results of their main labours and strivings have passed, unremembered and almost unwritten, into the everyday lives of their countrymen. How difficult at times was the task of meeting every claim, even with the apparently magnificent possessions of the Abbey, may appear from the words wrung in his last moments from John de Marinis (A.D. 1308):—"Let not my successor fail to explain the heavy debts,—the very indigence,—of our house to our Lord the Pope;—*præ cupiditate Curiæ Romanæ*" (Walsingham's "Gesta," vol. ii., p. 108, where the very small balance of cash in hand is also carefully specified). The level of the niches and their shapes and sizes of course differ from those of the remaining substructure of the Confessor's shrine at Westminster: there,—"The *lower* parts of the north and south sides are pierced with three niches each. It was in these that sick people were frequently left during the night, in the hopes of a cure being effected by the intercession of the saint." Unfortunately the large slab that originally tied the whole structure together, and formed the floors of the niches, has not been discovered, another stone now supplying its place in the restoration; we are thus deprived of the information that might be afforded by a sight of the original surface. . . . The 7-in. squares placed with their diagonals on the axes, cut cleanly through the Purbeck grounds of the two outer panels of each side of the substructure are also enigmatical. Were they open or closed by metal work? Was it permitted to privileged visitors to touch some objects within the structure with the finger-tips of their outstretched hands?—on occasion to bathe shattered or withered limbs in an atmosphere deemed of peculiar sanctity? "The infirm persons may be seen (in the illuminations) creeping through the holes in the tomb. The latter is by no means an uncommon practice, and in several parts of France tombs of this description still remain." ("Gleanings, Westminster," p. 136). But here we have 7 in. by 7 in.! Can this at any time have been suitable for Englishmen, however reduced by sickness? . . . The tripartite sub-bases, by all reason may be supposed to belong to the trefoil-shaped (in section) 4-inches-across shafts of a slow twisted kind, of which numerous fragments have been found. These sub-bases cut into the lower most expanded step,—the 12 ft. by 6 ft. 9 in. step mentioned above; one opposite the centre buttress, and one opposite each end buttress of each side of the shrine. Their complete form has not yet been ascertained. May the account given by Matthew Paris of certain fittings of Abbot Symon's (1168–1183) shrine be accepted as an indication of a possible use for these little twisted pillars in the one that eventually superseded it? "Abbot William (1214–1235) appointed that the six wax tapers should be lighted on those feasts which are celebrated in copes, and especially on the principal days; for the maintenance of which he assigned, with the consent of the convent, a mark to be received of the house at Binham," [in Norfolk, a priory,—not always very willingly,—subject to this monastery], "instead of the pickle which we are accustomed to receive annually." . . . The four-lobed (quatrefoil on plan) shafts, in dimension about equal to the three-lobed last mentioned, with appropriate nicely-moulded caps and bases, would seem to have been destined for some similar purpose, but their situation is indicated by no traces yet hit upon. Here the conclusion, come to under the guidance of an illuminated MS., that "two columns one at each end of the Westminster shrine did not bear lamps, but figures (of St. John and the Confessor)" may occur to the memory of the reader.

And,—so as not to extend indefinitely a sort of catalogue of bones of contention,—the colour applied to the visible surfaces of the clunch panelling and groining of the niches may be considered the last ground for controversy now to be pointed out. So liberal and so bold a use of vivid red, blue, and yellow, on skilfully-cut and admirably-designed ornamentation, should provoke from the advocates of unpainted stonework some protest against the bad taste of a later time, which disguised the pure forms of the work of an earlier age; and perhaps in return extract from others an expression of admiration for the variety and the harmony also, visible now at least when the hues are sobered by time and evil usage. The thin partitions between the niches are formed of Purbeck (1¼ in. thick from ground of panel to ground of panel up to the springings of the arches, finished similarly on both sides); but above of clunch (of only half the thickness wrought on one side only, as the joints of the groining centre with the supports); and the lower trefoils of the clunch tracery being on the same face with the Purbeck, are painted in its exact tone and semblance;—perhaps hardly to be avoided if anything of this sort was to be done, but liable to be treated to some oblique regards by true oligo-chromaticians.

We may mention that in order to keep all charges in respect of the shrine apart from the Reparation Fund, so urgently required for the very extensive works of substantial restoration, Mr. G. G. Scott has from the first made himself personally responsible for the cost of the tentative putting together, and for the more laboured experiment now in progress (estimated roughly at 100*l.*); not, of course, refusing the proffered help of any taking a peculiar interest in the bringing again into complete form of one of the most admirable productions by most skilful hands, in what many are inclined to consider the period of the full perfection of Gothic architecture in England.

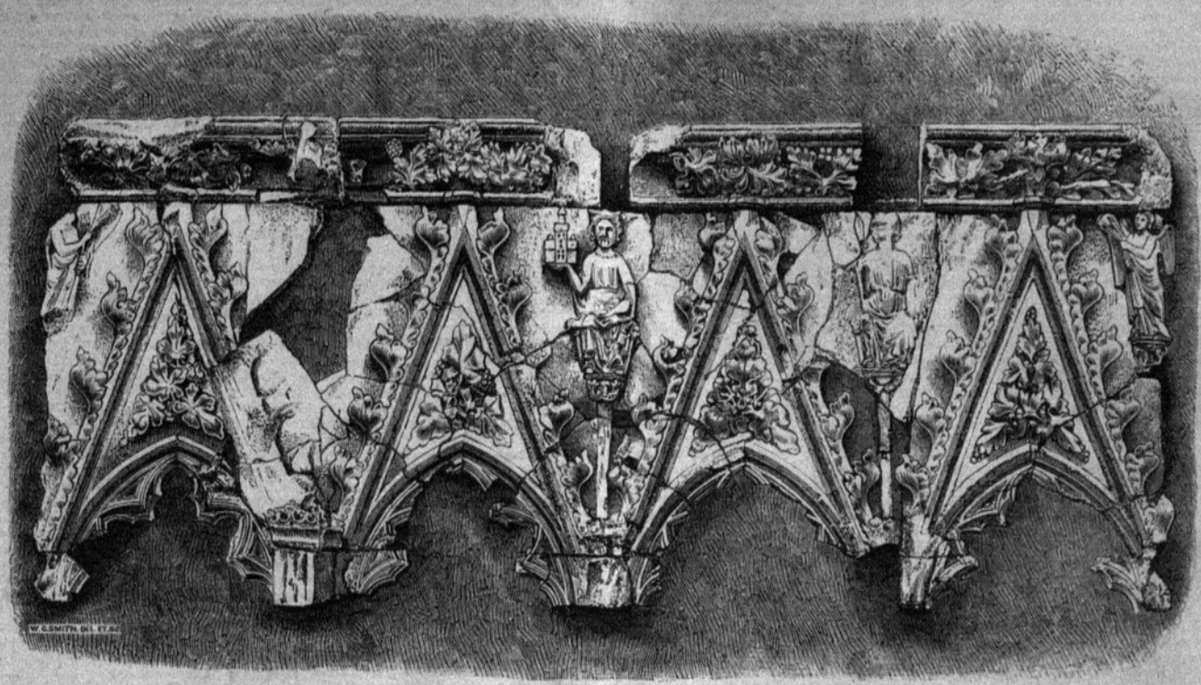
Looking at the arches now put up as the south side, the gablet on the right hand side contains the Hawthorn in fruit; the next, Oak in fruit; the third, Bryony in fruit; and the gablet on the left hand side, Maple in fruit. All the subjects being in fruit, it follows that if they were carved from nature, which seems probable, the work must have been done in September or October.*

* Notice of works to the Shrine, in the time of John IV. (de Marinis or Maryns), Abbot 1302–1308, may be found in the "Gesta Abbatum Monasterii Sancti Albani, a Thoma Walsingham, regnante Ricardo Secundo, compilata." Edited by Mr. H. T. Riley. Longmans, 1867 (3 volumes). A compilation of the date of the last ten years of the fourteenth century;—from 1308 by Walsingham himself, for some time manager of the copying-room of the Abbey: immediately previous, from materials no longer in existence,—the date of the original reduction is therefore not known. Among the acts of Abbot John IV.—"Tumbam autem Sancti Albani, et feretrum, amovere fecit, honorifice istud decorando, et expensas exposuit, sine multis curialitatibus, *plus quam centum sexaginta marcas* in pecunia numerata." Vol. ii. page 107.

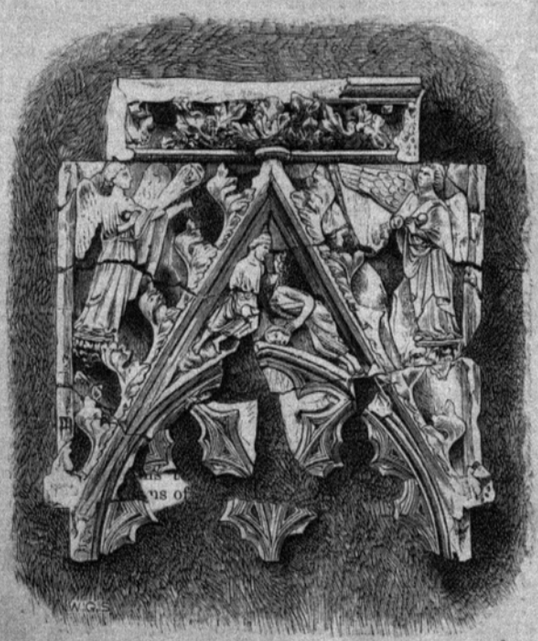
* The drawings we have engraved were made from photographs produced by Mr. Downer, of Watford.

THE CINCINNATI FOUNTAIN, UNITED STATES.

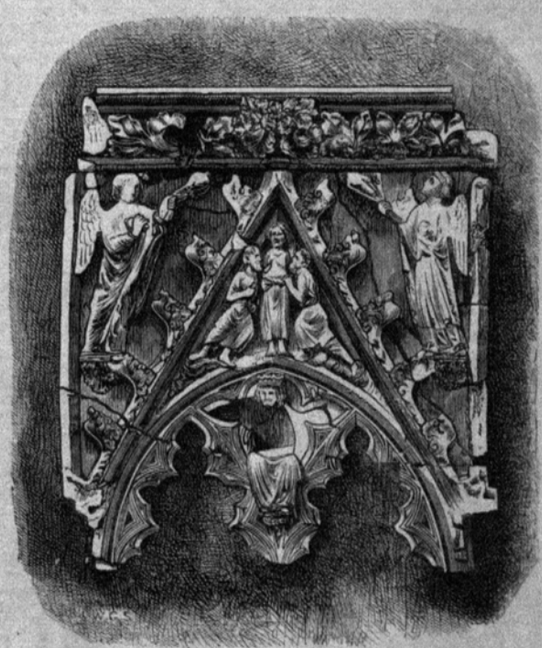
DETAILS OF THE NEWLY-DISCOVERED SHRINE, ST. ALBAN'S ABBEY.



*Now the South Side.*

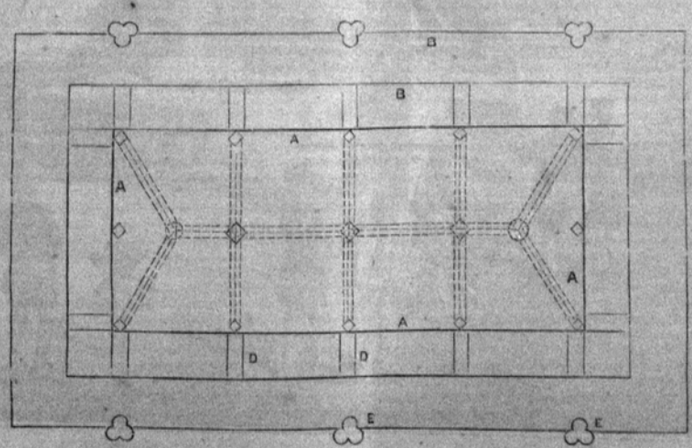


*West End: Martyrdom.*



*East End.*

A. Root.
B. B. Steps.




D. D. Buttresses.
E. E. Three-lobed Bases.

*Sketch Plan of the Shrine.*

## THE CINCINNATI FOUNTAIN, UNITED STATES.

THE metal fountain we illustrate has been recently executed at the foundry of Mr. F. Von Miller, in Munich, for Cincinnati, U.S. The whole height is 35 ft. English; the width of basin, 30 ft. The weight of metal is 38,244 lb. English. The basin is made of polished granite. The top figure is 9 ft., the lower figures are 8 ft. high.

The design and models were made by Mr. Auguste Kocling. The children are by Mr. Fredrick Miller and Mr. Ferdinand Miller, the sons of the proprietor of the foundry. The granite-work was executed by Stonemason Aikerman, in Weissenstadt, Bavaria.

The cost of the whole fountain, including piping and construction, is 10,000*l*.

The intentions of the designer include, first, a mother leading her child, a sturdy boy, to the bath, the child clinging timidly to her arm. On the right, an artizan standing on the roof of his burning house, prays to heaven for water. On the left, a peasant plants a tree, which will need the fructifying rain. He is leaning on his plough; his panting dog crouches at the side. At the back, a daughter leads her sick father to the healing spring. Decorated stems (proceeding from the pedestal) support four garlanded vases, from which proceed six-and-thirty streams of water. The pedestal is ornamented on every side with reliefs, representing the different uses of water (as sailing, fishing, steam). Prominent are seen a fisher-family, returned from a voyage, vessels in harbour, and a group of emigrants. At the back, we have water as a motive power,—a mill; people bringing grain; a weir on the right. As steam, water driving a huge hammer; locomotive engine behind.

The surmounting figure is a genius hovering over all, from whose outspread hands the divine blessing streams, and falls as rain.

The whole rests upon a base of syenite, and a wide basin of the same stone surrounds the work.

Four figures of boys, on as many granite pedestals, placed on the margin of the basin, supply the drinking apparatus. One figure holds a water-spirting dolphin, a second reins a turtle, a third has a water-snake wound round his foot, the fourth is endeavouring to catch a duck.

An inscription on the capital tells that it is the gift of two citizens to the people of Cincinnati. Another inscription, on the socle, gives the names of the artists employed on the work.

## RULES TO BE OBSERVED IN PLANNING AND FITTING UP SCHOOLS.

THE London School Board have adopted the following rules to be observed by competing architects in making designs for Board schools:—

*Preliminary Remarks.*

In planning a school-room and the necessary class-rooms, the accommodation depends not merely on the superficial area, but on the relations of the class-rooms to the general room, their shape, the pos' ns of all the doors, windows, and fireplaces . the arrangement of the galleries and groups .. desks.

As the contemplated use of a building must always govern its plan, the system of teaching contemplated by the *New Code*, 1872, must first be considered.

This (*a*) divides all schools (above the infant stage) into six grades or "standards," probably commencing at the age of six and a half to seven, and corresponding generally to six successive years.

It contemplates (*b*) that the number of children to be taught by a certificated teacher, assisted by one pupil-teacher, shall be 60. That for every additional 40 children there shall be an additional pupil-teacher. And, that for every additional 80 children, the increase of teaching power may be either one assistant certificated teacher, or two pupil-teachers.

As experience has shown that the separation or isolation of classes in separate rooms has an important bearing on results, the lessons contemplated under the six standards should, *as far as practicable*, be taught in separate class-rooms. But as each school is under the general supervision of one master or mistress, this principle must, in some degree, be subordinate to the necessity for such supervision.

In preparing plans it is necessary always to consider not only the teaching power required, and the most convenient provisions to be founded thereon, but also the *annual working cost* involved throughout, and therefore to provide for the use of such materials and modes of construction as are not liable to involve frequent repair. Under this head, the method to be adopted for warming and ventilating will require special consideration.

For the sake of convenience, in any group of schools, six-fifteenths of the children may be considered as belonging to the infant department, five-fifteenths to the junior department (three first standards) and four-fifteenths to the senior schools together (three highest standards). The calculation assumes that in London the infants will pass to the graded schools soon after the age of six.

The site (*d*) must contain, according to the code (unless the price of land is very high) not less than 1,200 square yards, and must be quiet, healthy, and conveniently near the children's homes. In tenure, freehold.

*General Building Rules.*

1. No iron or wooden buildings can be approved.

2. The whole of the external walls of the school and residence, *if of brick*, must be at least one brick and a half in thickness throughout. *If of stone*, at least 20 in. in thickness throughout.

3. The walls of every school-room and class-room, *if ceiled at the level of the wall-plate*, to be not less than 14 ft. *If ceiled to the rafters and collar beam* (as in the case of the top story), they must be at least 11 ft. high from the floor to the wall-plate, and at least 14 ft. to the ceiling across the collar beam.

4. The window sills should be placed at a height of at least 4 ft. from the floor. The heads should not be much below the line of ceiling. A large portion of each window should be made to open. The upper portion is best. As a general rule clear glass is best for schools. All windows facing towards a street, or otherwise exposed to stone-throwing, should be covered externally with strong wire. The precise amount of window-surface and its distribution will be governed in some degree by the aspect.

5. Framed and movable wooden partitions should not be generally used between school-rooms and class-rooms unless made double, with a clear space between of 6 in. to stop the noise. They should be *hung from the top* on large wheels. No complicated machinery or gearing likely to get out of order can be allowed.

6. Class-rooms should be on the same level as the school-room, and should never be passage-rooms from one part of the building to another, nor from the school-rooms to the playground or yard. As a rule they should be entered from the general school-room, and the upper panels of the doors should be of clear glass for purposes of supervision.

7. Water-closets, and the approaches thereto from the school, must always be separate for the sexes and for infants. Their best position is *outside* the school, and approached (where practicable) by a covered way. The number should never be *less* than two to every hundred children. They must be subdivided, having a door and light to each subdivision, and be of the simplest possible construction, with ample provision for flushing. Their arrangement in a straight line is best. The drains therefrom must be carefully trapped. There should be a separate w.-c. for the master or mistress.

8. The porch must be external to the school-room.

9. The lavatories should not be outside the building. They must be supplied with cold water only, and the basins should be numerous, or much time will be lost after an interval of play. About four to each hundred will generally be found sufficient.

10. The cap and bonnet rooms should be separate for each school, and should have two doors, one for ingress, the other for egress, to avoid confusion.

11. A manager's room should be provided for each group of schools.

12. There should be three playgrounds wherever the size of the site will permit. But in the case of sites of limited sizes the infants' and girls' playgrounds may be in one. Occasionally the infants' playground may be formed under some part of the main building, but always on a level with the ground. Playgrounds should be properly levelled, drained, inclosed by walls, and laid with tar-pavement, asphalte, or other material, to insure dryness.

13. The principal entrances should be kept as far apart as possible, and where the site has more than one frontage, the boys' entrance should be from a different street. Each entrance should be marked by name, as Boys, Girls, or Infants.

14. Staircases should always be of stone or other fireproof material, and should be separate for each school. But for purposes of management, there should either be facility of passing from one school to the staircase of another, or, where this is impracticable, an entirely separate staircase for managers only.

15. The buildings should be designed with regard to the Metropolitan Buildings Act, 18th and 19th Vic., cap. 122, and to the requirements of the Metropolis Local Management Act and Amended Acts as to lines of frontage, &c.

16. In height they should not, as a rule, be less than two stories, and should exceed three stories only in extreme cases.

17. It will generally be found necessary to provide a caretaker's residence, of not less than two rooms, applicable to the whole group.

18. It is not desirable that, in new schools, any of the boundary-walls should be party-walls.

19. The words "*School Board for London. Public Elementary School* [*Name.*]" should be placed in a permanent and legible manner on the face of each school-house.

*Infant Schools.*

1. An infant school should always be on the ground floor.

2. It should never be without a playground of at least 25 superficial feet to each infant, of which a portion must be covered.

3. It is not desirable that in London any infant school should be organised for less than 120. The maximum number may be taken as 240. And, where the number rises above this, there should be more than one infant school.

4. In every case there should be two class-rooms, one for babies, and another for the most advanced infants. Up to 120, these should be arranged for about 30 each. In the case of a school of maximum size, there should be a third class-room of larger size, and the two smaller class-rooms should then be capable of being thrown into one. In consideration of the noise caused by infant teaching, there should be no sliding or wooden partitions in infant schools other than those necessary for throwing two class-rooms into one.

5. The widths hereinafter laid down as the best for graded schools do not apply to infant schools.

6. The fittings should always comprise two galleries of unequal size. No gallery in a class-room for infants should hold more than 80 to 90. The large gallery in the school-room should be capable of accommodating the whole of the infants at one time, for collective teaching. The class of advanced infants will require a small group of benches and desks. The advanced class should have a cupboard for books, &c., about 6 ft. high.

7. The area of the school-room and class-rooms together shall be in all cases not less than 9 superficial feet for each infant.

*Graded Schools.*

1. In arranging a school for children of seven years and upwards, the junior mixed school should embrace standards 1 to 3, and the senior schools three higher standards. In point of number, any multiple of thirty, thirty-five, or forty will be found most convenient.

2. Each school (whether junior or senior boys or girls) should have a general school-room for the assemblage of the whole at one time, calculated at 4 ft. superficial per child, or more, according to circumstances.

3. Each school of the largest size should have two double class-rooms, calculated at 8 ft. to 9 ft. superficial per child, and each class-room should be arranged with sliding partitions, so as to be subdivisible into two.

Where fewer class-rooms are provided, the total area of school-room and class-rooms together must not be less than 10 ft. superficial per child. And the school-room should then be provided with a sliding partition for subdivision.

4. Where practicable, there should be an additional class-room, of large size, available for use sometimes for boys and sometimes for girls, and provided with a top-light or highly-placed windows, so as to be suitable for a drawing class. It should have provision for placing casts, sculpture, &c.

(*a*) New Code, page 7, par. 28.
(*b*) „ „ „ 7, par. 32 (c).

(*d*) New Code, page 18, par. 29.

5. The best width for the general school-room is from 18 ft. to 22 ft. (This contemplates three rows deep of benches and desks ranged along one wall.)

Five rows deep of benches and desks are allowable in a class-room. The lighting should, if possible, be chiefly from the side.

6. Generally, an allowance of 20 in. on each desk and bench will be necessary: otherwise the children will be cramped in writing. The lengths will, therefore be as follows, viz.:—

| | Feet. | In. |
|---|---|---|
| For 4 children, a length of | 6 | 8 |
| ,, 5 ,, ,, | 8 | 4 |
| ,, 6 ,, ,, | 10 | 0 |
| ,, 7 ,, ,, | 11 | 8 |
| ,, 8 ,, ,, | 13 | 4 |

For senior classes the provision should be 22 in. The depth should not exceed five rows, except in the case of galleries for collective teaching.

Junior schools should have at one end of the general-room a gallery for collective teaching capable of accommodating one half of the school at a time. Also provision in benches and desks for a double class of sixty to eighty.

Senior schools, as a general rule, do not require the gallery.

Benches and desks are required for all the children, and they should be of various heights according to the varying ages. The desks should be very slightly inclined, and the seats should have backs. It is not necessary to fasten the fittings to the floor. They should be either placed on slightly-raised platforms, or (if made to move on castors) should themselves be graduated. Each of the six classes (or standards) should have a cupboard for books, &c., about 6 ft. 6 in. high.

*School Residences.*

In cases where the erection of a residence for the master or mistress has been determined on, it should contain a parlour, a kitchen, a scullery, and three bedrooms, of not less than the following dimensions, viz.:—

(a) For the parlour ..... 12 ft. by 12 ft.
(b) ,, kitchen ..... 12 ft. by 10 ft. } of superficial
(c) For 1 of the bedrooms 12 ft. by 10 ft. } area;
(d) ,, 2 other bedrooms 9 ft. by 8 ft. }
(e) The height to be in no case less than 8 ft. to wallplate, if ceiled at the wallplate; or 7 ft. to wallplate, and 9 ft. to ceiling, if ceiled to the collar.

The residence must be planned so that the staircase should be immediately accessible from an entrance-lobby, and from the parlour, kitchen, and each bedroom, without making a passage of any room.

Each bedroom must be on the upper story, and must have either a fireplace, or proper provision for ingress and egress of air.

The parlour must not open directly into the kitchen or scullery.

There must be no internal communication between the residence and the school.

There must be a yard, with offices separate from the school premises.

*Plans Required.*

The following plans are required in each case, together with one copy of each, on tracing calico, to remain at the office of the Board. The dimensions of the several parts must be figured, and the respective scales strictly adhered to in the drawings:—

1. A block plan of the site, drawn to the scale of 20 ft. to an inch. This plan should show:—
   *a.* The position of the school buildings.
   *b.* The outbuildings.
   *c.* The playgrounds.
   *d.* The teachers' residences, if any.
   *e.* The drains (collateral and main), with their fall and depth below ground.
   *f.* The provision for removal of surface water.
   *g.* The entrances.
   *h.* The boundary walls, their nature, and the kind of property adjoining.
   *i.* The streets or roads.
2. Ground plans drawn to the scale of 8 ft. to 1 in., showing each floor of the school-rooms and teachers' residences (if any). The internal fittings of the school-rooms (fireplaces, groups of desks and benches, cupboards, &c.) must be accurately shown.
3. Elevations of each front and at least two sections. The ceiling, and the mode of warming and ventilation must be clearly shown.
4. A specification of the work, detailed for the several trades.
5. A general estimate of cost.

**A New Dispensary in Islington.**—The Islington Board of Guardians are about to erect a new dispensary in the Liverpool-road, which will not only serve for general dispensary purposes, but also as a relieving-office and vaccination station. The building, which is to be erected on the site of the old workhouse, has been designed by Mr. Higgins, the Board's surveyor, and the plans have just been approved by the Local Government Board.

## THE METROPOLITAN BOARD OF WORKS AND LINE OF FRONTS.

CHIPPENDALE AND OTHERS *v.* THE METROPOLITAN BOARD OF WORKS.

THIS case, tried in the Court of Common Pleas, is important. The plaintiffs were trustees of Amyas's Charity, and in that capacity they held the George and four adjoining houses in Old-street, St. Luke's. Beside the public-house there was a passage leading into George-yard, the whole of the houses in which yard were owned by the plaintiffs. The passage was 8 ft. 4 in. wide, and 7 ft. 9 in. high, the floor of the George being over it. In 1867 the plaintiffs determined to pull down the George and the four other houses in Old-street, and their plan was to have four houses on the site, and to have the entrance to George-yard made 10 ft. wide and 12 ft. high. The plan was laid before the Board of Works, and their approval was asked. The answer was that the Board had considered the plan, and they objected to the formation of a narrow archway entrance to the court. In consequence of there being only one entrance to the court they said it was a matter of importance that it should be of such a width and character as to admit some amount of ventilation, and the Board thought there should be an open (that was an uncovered) entrance, and that it should be put back to the line of the houses in the court, which would make it 17 ft. 4 in. wide. After some correspondence the plaintiffs amended their plan in accordance with what the Board had said; and they had to alter their building contracts and sustain a loss of 28*l.* a year rent. The 74th section of the Board's Act said that in the event of buildings which projected beyond the line of the street being pulled down the Board might require the same to be set back to such line and in such manner for the improvement of the street as they might direct. Having done this the Board was bound to compensate the owner of the property. The main question submitted to the Court upon these facts was whether the Board did "require" the building plans to be altered so as to render them liable to pay compensation.

The Court was divided in opinion upon the question.

Mr. Justice Grove was of opinion that there were no words of absolute requirements in the correspondence, and that, therefore, the Board were not bound to give compensation.

The Lord Chief Justice and Mr. Justice Keating, however, held that the Board did "require" the alterations that they described in their letter, and that the plaintiffs were justified in treating it as a requisition under the 74th section of the Act. This being so the plaintiffs were entitled to succeed in their claim for compensation.

Judgment for the plaintiffs.

## A PLAGIARISM.

CHIMING.

IN your issue of the 23rd of March last, p. 231, you introduced to your readers a "Bell Catalogue" — a trade-book just issued by John Warner & Sons, of Cripplegate. I wrote to those gentlemen, requesting to be favoured with a copy, which I received from them in due course of post. Upon turning over the pages, I at once recognised their usual engravings, with a few additional cuts; but to my astonishment, on their 4th page (in juxtaposition with their machine for chiming on the next page) a copy of a block of my own—cut, from a drawing made by myself, by Mr. Brown, of Brompton, February, 1859, at my own cost—showing my contrivance for chiming any number of bells, as is there represented. The bell in my engraving is inscribed "Bitton Chimes, 1821," which I put to mark the date and the place where the hammers were first set up. This bell has been exchanged for a representation of a bell by Messrs. Warner! The letter-press, too, "Plate VII., the author's contrivance," &c., is altered, and instead are printed the names of some places where these gentlemen have set up the same; and below, in large type, is printed "No. 1, Warner's improved Chiming Apparatus." I looked for some mention of my name, but could find none with reference to this matter; but among the testimonials is one from myself relating to the small ring of bells in the tower of this place, which had been most ably spliced and augmented by them about ten years ago. On the cover is printed, "Any persons copying drawings herein contained will be prosecuted." Notwithstanding which, any person is at liberty to copy mine.

I feel it due to myself, as a matter of justice, to request your publishing in your world-wide columns, this statement of facts, that your readers who may have an opportunity of comparing the two engravings, may see and form their own opinion of this transaction on the part of Messrs. John Warner & Sons.

The block was cut to illustrate the second and now third editions of my "Remarks on Belfries and Ringers." (It was also published in the *Ecclesiologist*, June, 1864). Soon after my first using the block, I lent it to Messrs. Warners, and they appended it at the end of their then issue of catalogue without any alteration; but after they had brought out their "Chiming Machine" at the Exhibition of 1862, which they thought more complete than my system, they declined to introduce both, but in July following Mr. Compton Warner writes to me that "we are about to fix your apparatus to the eight bells at St. Michael's, Paddington," one of the places where they now say they fixed it as *their own*.

These chiming hammers of mine have been set up in a great many towers, and attached to rings of bells from one to twelve; the work has been done by one Thomas Hooper, of Woodbury, an industrious hard-working tradesman, at a cost of 1*l.* a bell besides his travelling expenses, and he tells me that he gets a fair profit at that price. He has lately attached them to the twelve new bells at Worcester Cathedral, cast by Messrs. Taylor.

Upon writing to Messrs. Warners for an explanation, they maintain that their illustration has been cut from a drawing made by their own draughtsman, and is not copied from mine; that they felt aggrieved that of late my former good feelings towards them have been alienated; that whenever I can do so I recommend Thomas Hooper, of Woodbury; running away with the notion that all this is done to *put capital in my own pocket!* that my supposed invention is not mine, for that H. Boswell, a very clever man, whom I recommended to them, informs them that his father (a bell-hanger of Oxford, long since dead) put up the very same; also they complain that when they are negotiating for a job, and any of the clergy consult me about their bells, I advise them to *hold hard* in their dealings.

I understand from the clergy of the places where Messrs. Warners have set up these chiming hammers that they charge from 40s. to 60s. a bell.

H. T. ELLACOMBE.

*Rectory, Clyst St. George.*

## FRATING CHURCH, ESSEX.

THIS church has been restored, or rather almost rebuilt, except the chancel and the tower, under the direction of Mr. C. F. Hayward, F.S.A.

It was re-opened on Tuesday, the 23rd April, by the Bishop of Rochester. New roofs to nave and chancel, a new aisle on north side, and other works have been carried out. Some good carving of a somewhat novel character has been executed by Mr. McCarthy. At the chancel arch right and left of the impost, angels have been carved in very low relief, and very effective sunk work of a similar character to the springing of arches above the caps of nave columns.

The aisle passages and chancel have been paved with Maw & Co.'s tiles, which have also been used as a wall lining and low reredos; beneath the east window, a triple lancet, an ancient sedilia has been opened on the south side, and a curious square opening beneath the sill of one of the windows on the same side of chancel has been restored to its original form, according to indications found, viz., an oak door, hinged, fastened by a wooden bar inside, and protected by two iron bars on the outside.

The porch has been repaired, and the ancient weather-worn woodwork, some of very large scantling, retained. No expense has been spared by the rector, who has done all at his own cost to make the building so far good and complete.

Last year the tower was extensively repaired, externally and internally, the bells rehung, and a new roof, forming, like the old one, a low spire, fixed. A fireplace was found in the wall at the foot of the turret stairs, and a flue from it running in the wall half way up the tower, but without any exit, no appearance of its ever having been used was discovered.

In this church there is a Holy Sepulchre recess on north side. A new aisle has been added to a former quasi-transept on the north side of nave, and a new tower arch built. The flooring of

spaces occupied by the benches is of wood blocks laid on concrete, which makes a dry and almost noiseless floor, while according with the tile paving of the aisles better than a common floor on joists, &c.

The warming of the church, which is understood to be satisfactory, has been carried out by Mr. Porritt, of Manchester. The general contractor was Mr. J. Grimes, of Colchester.

## WHO SHOULD DECORATE ST. PAUL'S.

SIR,—It is not many years since that, at the instigation of the late Prince Consort, a Royal Commission was appointed for the purpose of obtaining all the practical experience available on the subject of mural decoration, and the mode of conducting works of this kind and on a large scale, to a successful termination. Sir Charles Eastlake, whose profound knowledge of the principles of art, scrupulous care, and learning admirably fitted him for the post, was unanimously elected secretary, and a body of information collected, methodised, and so lucidly expressed as to leave nothing to be desired. All this information was expressly gathered to help our inexperience in the conduct of great mural works, such as that proposed in the completion of St. Paul's. Yet, scarcely credible as it is, a committee, in seeming total ignorance of the existence of such a body of information for their guidance, at once proceed to act upon their own conceits. In the great art-epochs it was the artist who determined the decorations of an edifice, for it is only painters who are capable of executing monumental works that are fit to determine a scheme of decoration for such a building as St. Paul's. And in the appendix to the Report of the Royal Commissioners, we have the mode in which such works should be conducted thus enumerated:—

"On no point is Cornelius more decided than on the necessity of placing a given series of frescoes under the control of one directing artist. This appears to be quite compatible with the employment of many such directors, by subdividing the works; but he thinks it most desirable that in *one complete series* there should be a congruity of style and general execution. In Munich, where great experience has now been gained in these undertakings, several independent masters have formed scholars to work in their style, and these have been ultimately employed on original works."

I think the public have a right to call upon the Royal Academy and the press to interfere in this matter, and to see that those few painters who understand the subject of mural decoration have the direction of this national undertaking.

SCRUTATOR.

## THE SUBSIDENCE OF TURNMILL-STREET.

ON Friday in last week, at the Westminster Palace Hotel, Mr. Clutton, the arbiter appointed by the Board of Trade in the case of the Clerkenwell Vestry *v.* the Metropolitan Railway Company, resumed an inquiry into the causes which led to the subsidence of Turnmill-street, and the damaging of the sewer in that street to an extent that rendered its reconstruction necessary. The question in dispute is one between the Clerkenwell Vestry on the one hand, and the Metropolitan Railway Company on the other, as to whether the giving way of the sewer, and the injuries it sustained, was the result of the railway excavations, or any inherent defect in the sewer itself, or owing to its age. The amount claimed by the vestry is 1,700*l.*

Mr. Horace Lloyd, Q.C., appeared for the vestry, and Mr. Horatio Lloyd represented the railway company.

On the previous occasion when the arbiter sat to receive evidence in the case, the witnesses examined were on the side of the vestry. Mr. Haywood, the engineer to the City, and Mr. Gregory, C.E., were among the witnesses then examined, and they ascribed the sinking of the roadway in Turnmill-street, and the cracking of the sewer, to the depth at which the railway excavations were carried. They regarded the damage done as a natural consequence of the railway works.

On the resumption of the case on Friday, rebutting testimony was adduced on the part of the railway company.

Mr. Wm. Morton, the first witness examined, said he was resident engineer to the railway company in 1862, when the excavations at the Farringdon-street station were made. He superintended the construction of the work. The bulging of the wall he ascribed to the lodgment of water behind it. The wall was sufficiently strong to keep back the earth at the back, but it was not strong enough to resist as well the pressure of water which escaped from the sewer.

Mr. Fowler, the chief engineer to the Metropolitan Railway Company, said the cutting opposite Turnmill-street was made on a slope, and afterwards the retaining-wall was built. It was a very solid, strong-vaulted wall. Witness could conceive no theory which would lead him to the conclusion that the sinking of the sewer was the consequence of the railway excavations. The sewer was an old one, and, doubtless, built in a defective manner, as most old sewers were. In former times there was a tendency on the part of builders to "scamp" the sewer work.

Corroborative evidence was given by Mr. Baker, designer in the engineering department of the Company.

Confirmatory testimony was also adduced by Mr. Brooks, the foreman of the plate-layers.

Mr. Horatio Lloyd submitted that it was not for him to prove that the damage was the result of the railway excavations, but that the burden of proof rested with the learned counsel on the other side to prove that such was the case. He contended that the circumstances connected with the giving way of the Fleet sewer and the cracking of the Turnmill-street sewer were quite different, and pointed out that each of the witnesses on the other side had a different theory to account for the damage done.

Mr. Horace Lloyd, in reply, laid stress upon the fact that Mr. Fowler had, in the case of the Fleet sewer, expressed similar views to those which he expressed on that occasion; but the arbitrator was satisfied with the evidence given by Mr. Hawkshaw, that the damage done to the sewer was the result of the railway works, and those alone. He (the learned counsel) maintained that the circumstances of the case were analogous. The railway company seemed to have a most convenient theory. If a sewer were new, they held that it was imperfectly constructed, or had not had time to consolidate and settle itself; and if it were old, they contended that it was badly constructed, and by reason of its age incapacitated from performing the work it was constructed to fulfil.

Mr. Boulton asked the arbitrator when he would give his decision.

The arbitrator said the time allowed him by the Board of Trade for giving his award terminated on the 30th of April.

## SALTING ON PARIAN.

REFERRING to a letter signed "J. S." in your pages under the above heading,—parian cement, manufactured according to the patent and properly manipulated by the plasterer, will not effloresce, having nothing whatever in its composition to cause it to do so.

In the case in point, the following questions should be answered before any blame can be laid on the cement, viz.:—

Was the Portland backing allowed to get thoroughly dry before the finishing coat was put on? What thickness was the finishing coat? What proportions of sand to cement were used, and what proportion of water to cement?

Parian stuccoed on Portland after the latter has become "bone dried" will almost invariably make a good job, providing the parian is not overdosed with sand, and not painted on for at least twelve hours after using.

EXPERIENCE.

## DISTRICT SURVEYORS' FEES.

AT the Metropolitan Board of Works, on Friday in last week, the Building Act Committee presented a report on the question of what are to be considered separate tenements, for which an additional fee can be charged for surveying. It appeared that a house belonging to a Mr. Flight had to be surveyed under the Dangerous Structures Act, and the district surveyor charged one fee for the dwelling, and another for the privy building, which latter he deemed a separate tenement. Mr. Flight appealed against the double charge to the Metropolitan Board, and the question being submitted to their solicitor, the charge was declared by that gentleman illegal. The Board, however, referred the matter to the Building Act Committee, who recommended "That proceedings be taken by the solicitor against Mr. T. Flight, in order that the legal question might be raised." Another report was presented on a letter from the District Surveyors' Association, dated the 9th ult., suggesting that in any Bill for the amendment of the Building Act a provision should be inserted making the district surveyor's fees a charge upon the building, relieving them from the payment of costs in appeals to the superior courts in cases where the appeals are not made by them, and enabling them to state their cases before magistrates when proceedings are taken. The committee in this report recommended that the request of the Association be not acceded to. Both reports were adopted.

## ACCIDENTS.

DURING a recent thunderstorm the lightning struck one of the pinnacles of the tower of St. George's Church, Kidderminster, and injured it so much that it will probably have to be taken down. The pinnacle was completely twisted round by the force of the electric current, and several pieces of stone were thrown a considerable distance right over the tower.——A stack of chimneys, at Nostel Priory, about five miles from Wakefield, has also been struck by lightning. The stack is built of extremely strong stone-work, the top of it being more than 50 ft. from the ground. The lightning seems to have entered two contiguous chimneys, divided by a thin partition. This thin partition was untouched, but the stonework of each chimney, nearly 1 ft. in thickness, was completely shattered and blown out, leaving a hole in each nearly big enough for a wheel-barrow to enter. Stones larger than a man's head were blown out horizontally, first, over 25 ft. of roof, and then over a flight of steps extending more than 20 ft. from the wall of the house. Thus, they were thrown nearly 50 ft. from the chimney into the carriage-road below. A thunderclap was heard at the same moment, like the report of a cannon. The trace of the electric force can be observed lower down in the chimney than the fracture described.——The chimney of a house situated in Edmonds'-buildings, New-street, Worcester, has fallen upon, and passed completely through, the roof of the Swan-with-two-Necks, and that of the adjoining house. The property is in a dilapidated condition.

## SCHOOL-BUILDING NEWS.

*Tower-hill, London.*—The new Roman Catholic Schools here have been formally opened, in the presence of a vast concourse of people. The district is one of the most densely populated in London, and is inhabited by very poor people. The foundation-stone was laid in June, 1870, by the Princess Marguerite of Orleans, who has always taken the deepest interest in the education of Roman Catholic children in the district. Prior to her leaving England, on the occasion of her marriage with Prince Czartoryski, the princess sent her crucifix as a present to the school children. The schools are large and commodious. The block is four stories high, and built of red brick, relieved with white and yellow archings and stone coigns and dressings. The lower floor is the infant school, which is fitted with galleries and all necessaries for teaching. Attached to this is a kitchen, where food is prepared for the children whose parents are of necessity away from home during the working hours of the day. The next floor is the girls' school, which has commodious class-rooms. The second story is used as a school for the elder girls, where they are taught to make shirts, dresses, &c. At certain hours they are taken to the kitchen and taught how to cook the children's dinners in order to fit them for discharging wifely duties later in life. Many ladies join in this good work. For the boys' school on the next floor, lay masters are provided, and the educational work—pure and simple—is under Government inspection. The clergy found the need of establishing something whereby a hold might be maintained on the elder girls who had left school. With this end in view, a "Protectory" was established, where they are taught various trades, and furnished with one substantial meal each day, receiving a small sum weekly in addition.

*Linley, Bishop's Castle.*—The foundation-stone of a new school has been laid at Linley, for the parish of More and part of Lydham. The new building will be completed as early as possible, by Messrs. Coles & Sayce, the builders employed upon Mr. More's estate.

*Findon (Sussex).*—The foundation-stone of the new national school has been laid here. The ex-President of the Board of Trade, the Right Hon. John Bright, M.P., was present, and while Miss Willett, who laid the stone, was performing her part of the ceremony, stood beside her, and intimated to her how she was to act. Several new coins, as usual, being placed in the hollow of the stone, the vicar, before the hollow was covered up, stepped up to Mr. Bright, and asked him if he would like to place a bran new sovereign with the other coins; to which the right hon. gentleman laughingly replied, "No, thank you, I would rather not lose it." The estimated cost of the building is about 1,000*l.*

*Bradford.*—Holy Trinity Church Schools, which have recently been erected in Mount-street, New Leeds, in connexion with Holy Trinity Church, have been opened. The schools now consist of a boys' school to accommodate 202; a girls' school to accommodate 193; and an infants' school to accommodate 193. The infants' school is an enlargement, but the other two rooms are entirely new. The infant school is 60 ft. by 21 ft. in extent, the girls' 60 ft. by 20 ft., and the boys' 71 ft. by 19 ft. Each room is provided with a class-room. The total cost has been 2,100*l.*, and all the money has been obtained except about 250*l.*

*Yarmouth.*—The corner-stone of the new schools in connexion with the St. James's Mission has been laid. The building will consist of boys' school, 50 ft. by 20 ft.; girls' school, 48 ft. by 20 ft.; and infant school, 66 ft. by 20 ft., with the requisite class-rooms, lobbies, and offices. The style will be of plain Gothic character. The external walling material will be of red brick, with stone and brick dressings, faced internally with red bricks, and having

white brick bands at intervals. The roof will be open-timbered, stained and varnished, and will be of good height. The buildings will form three sides of a square, with an open arcade round the central portion. Accommodation will be provided for about 500 children, according to Government regulations; and the total cost of the buildings will be about 1,500*l*. Mr. J. T. Bottle of Yarmouth, is the architect; and the contractors are Messrs. J. Leggett & J. H. Want.

## CHURCH-BUILDING NEWS.

*Rushock.*—The re-opening, after restoration, of Rushock Church, has taken place. The sum of between 300*l*. and 400*l*. found necessary for the work, having been speedily raised, Mr. T. D. Baker, architect, Kidderminster, prepared the plans and superintended the restoration gratuitously, and his instructions were carried out by Mr. Tolly, of Lady's Wood, builder. The old square seats have been removed and substituted by stalls, the ends and rails of which are of oak, and the backs and seats of stained deal; the west gallery has also been entirely re-seated, and a new panelled front, formed of the same material as the sittings in the body of the church, supplied. The reading-desk, pulpit, and lectern, are all of oak, and entirely new, and a new organ, by Cox & Spires, of Banbury, placed in the north transept. This instrument is the gift of the Rev. Melville R. Moore. A stained east window has been also presented to the church by the Rev. J. Piercy. The chancel-arch has been cut back, choir stalls placed just without the chancel, and the whole of the interior of the building has been coloured. The repairs to the exterior have been confined to the roof, which has been rendered impervious to the weather, and covered with Broseley tiles.

*West Bridgford (near Nottingham).* — The parish church of West Bridgford, an ancient and venerable structure, has been again thrown open for public devotion. The dilapidated state into which the edifice was rapidly falling, rendered a restoration necessary, and Messrs. Hine & Son, of Nottingham, were engaged to prepare the necessary plans. The builder, Mr. Young, of Lincoln, commenced operations six or seven months ago. The loft and pews were swept away, the plaster stripped off the walls, and the interior made to present a renovated appearance. A new roof has been erected at the eastern end, an organ-chamber has been provided, new windows put in, and in the place of the pews free and open sittings have been substituted, capable of accommodating about 180 people. Many of the interior fittings are new, and the entire alterations have, we understand, involved an expenditure of between 700*l*. and 800*l*.

*Lincoln.*—The church of St. Mary-le-Wigford has been re-opened, after restoration and enlargement. There are three east windows—two lancets and one vesica—painted by Messrs. Clayton & Bell, and the gift of Mr. H. K. Hebb, in memory of his father and mother. The restoration of the edifice has been carried out according to plans prepared by Mr. Clarke, of Nottingham, the contractor being Mr. Robert Young, of Lincoln.

*Wookey.*—St. Matthew's Church, Wookey, has been restored. It has been re-opened by the Bishop of Bath and Wells. Prior to 1871 the many inconveniences associated with the architecture and arrangements of a remote period had long been felt, and on the Rev. M. Drummond succeeding to the living, the exertions of the parishioners were renewed, and sufficient funds were soon forthcoming to warrant the promoters of the restoration scheme in commencing their work. The vicar has taken the responsible office of director of the works, unaided by any committee, but it is only fair to add that he has been ably supported, in a pecuniary point of view, by Messrs. Perkins, of Eastcott House, and the family of the late Rev. Burnett-Stuart. The restoration, which has been carried out by Mr. Andrew Knowles, of Wrington, builder, at a cost of nearly 1,700*l*., from designs prepared by Messrs. Giles & Gane, architects, London, includes new roofs of oak and pine, the re-seating of the entire building with stalls of oak with deal panelling, a new pulpit and lectern, reredos, and windows of stained glass. The reredos, which is composed of Bath stone, with alabaster panels, representing "The Passion," is the gift of Mrs. Perkins; and the east window is contributed by the Stuart family, in memory of the late vicar. The window in the north aisle, representing "The Annunciation," has been erected at the expense of Mrs. Perkins, to the memory of her late husband.

*Melsonby.* — The church of St. James the Great, Melsonby, near Richmond, in Yorkshire, has been re-opened, after repairs and restoration. The flat roof with its heavy cross-beams has given way for a pitched roof, the old square barn-like windows have disappeared, and have been replaced by stained glass lancet-shaped windows, and the old-fashioned high, straight-backed pews, with doors, are superseded by convenient pews, with sloping backs and without doors. Several alterations have been made in the chancel. The vestry has been placed on the north instead of the south side, and has an entrance from without. The old pulpit has been substituted by a reading-desk and rostrum. A new organ has been obtained for the church, and stands near the chancel. An additional bell has been hung in the belfry, and a clock in the tower.

*Dodworth (near Barnsley).* — The large east window of St. John's Church has been filled in with stained glass, as a memorial of the late Thomas Taylor, and under it a reredos erected of the new painted tiles lately introduced by the artist. In the former, which is of two lights, size 12 ft. by 4 ft., with circular heads and tracery, are represented in panels the subjects of Christ and the woman of Samaria and Christ in the house of Mary and Martha, the background and border forming the remaining portion of the window being composed of coloured diaper and ornament of twelfth-century character. The reredos combines, it is said, in itself a system of painting which can be carried to the highest point of art, producing when completed an imperishable mural painting. The design over the altar-table is arranged in three panels, the centre one containing the Agnus Dei, and the two side panels the texts, "I am the true vine." "Abide in me and I in you," interwoven with the vine, passion-flower, and corn. On either side of this central design are the Lord's Prayer, Creed, and Ten Commandments. The sides of the sanctuary as high as the reredos have been painted a dull green and diapered. New decorated iron standards and an oak rail have been erected across the sanctuary. The whole of the work has been executed by J. W. Knowles, glass stainer and mural decorator, York.

*Bristol.*—The restoration of Temple Church is about to be forthwith commenced, and tenders for the works (from plans supplied by Messrs. Ponton & Gough) are being obtained.

*Anstey.* — The ancient parish church of Anstey, Herts, has been re-opened, after a partial restoration. The old pews have been replaced by open seats of stained deal, copied in design from some of the original oak seats found in the church. The new sittings are provided with kneeling boards, and the flooring upon which they are fixed is of yellow deal, with oak borders, and is level with the tile pavement. The west gallery has been taken down, and the choir have now accommodation in the south transept. The *miserere* seats in the chancel have been repaired, cleansed from paint and colour, and refixed in their old position. The altar-rail, altar-table, lectern, and prayer-desk are new, and of wainscot oak and walnut, and the pulpit which is of similar materials, with open-traceried panels, fixed upon a Portland stone base, is the gift of Miss Sale, the rector's sister, in memory of her father. Red, black, and encaustic tiles mixed with some portions of Portland stone paving are used for the chancel floor, which is laid to a pattern designed by the architect. The other floors are laid with Peake's red and black Staffordshire quarries. The church is heated by a Porritt's stove, the flue from which is carried up the north-east buttress of the tower, in a new shaft of masonry. The north transept gable wall, which was in a very dilapidated condition, has been taken down and rebuilt; the old windows have been reset with new stone where they were found to require it; and the whole of the stonework of the columns and arches of the arcades, of the windows in the chancel, of the sedilia and piscina, and generally throughout the church, has been cleansed and restored. The bells in the tower (six in number) have been rehung, and they have been fitted (by Mr. Hooper, of Woodbury, Devon), with the new chiming hammers, invented by the Rev. H. B. Ellacombe, rector of Clyst St. George, Cornwall, by means of which a whole peal of bells may be easily chimed by one person. The work of restoration has been carried out (under the superintendence of Mr. Butterfield, the architect) by Mr. Gibbons, of Buntingford, at a cost of upwards of 1,000*l*.

*Bognor.*—An influentially attended meeting has been held to consider the state of the parish church of South Bersted, of which parish the town of Bognor forms the most important part. The chair was taken by the Bishop of Chichester, and it was resolved that the parish church should be restored and enlarged, and a committee was appointed. The cost of the works has been estimated by Mr. Christian, the architect, at about 3,000*l*. It was at the same time strongly urged that church accommodation was greatly wanted in the town, the parish church being about a mile from Bognor.

*Petersfield.*—The committee entrusted with the carrying out of the restoration of the parish church have met to consider the report, and to inspect the plans, &c., prepared by the architect, Mr. A. W. Blomfield. The plans, except a few minor details, were approved. The cost is estimated at something over 6,000*l*., and a subscription list was opened, commencing with 1,000*l*. from Mr. W. Nicholson, of Basing Park, M.P., supplemented by other subscriptions raising the amount to 2,250*l*.

*Radford.* — The large and commodious new chancel which has been erected in connexion with Old Radford parish church has been consecrated by the Bishop Suffragan of Nottingham. The new chancel, organ-chamber, vestry, and half of the nave reseated, have cost 1,250*l*. The designs were obtained from the architect, Mr. R. C. Sutton, of Bromley House; and the contractors were Messrs. Stevenson & Weston. One hundred and thirty-five additional sittings have been provided. The pews and the gallery at the west end have not been interfered with, but the seats are all free. The construction of the chancel corresponds with the other portion of the building. The stained-glass window at the eastern end has been erected by the tenantry of the late Mr. Sherwin Gregory to the memory of that gentleman. The subject is the Crucifixion. The makers are Messrs. Heaton, Butler, & Baines, and the cost is about 150*l*. The entire estimated cost of the present restoration and improvements is 1,340*l*.

## Books Received.

*Natural Philosophy for General Readers and Young Persons.* Translated and edited from Ganot's "Cours Elémentaire de Physique." By E. ATKINSON, Ph.D., F.C.S. London: Longmans, Green, & Co. 1872.

THIS well designed and illustrated popular treatise is not a translation of Ganot's chief work, nor is it an abridgment of that work; but is translated and edited from another and minor work of Ganot's, which has had an extensive circulation in France, and is more suitable to general readers and young persons. It is not a strict or mere translation even of that work, however, but has such additions and alterations as were thought fitted to render the book more useful to the classes for which it is especially designed, namely, as a text-book of physics for the middle and upper classes of boys' and girls' schools, and as a familiar account of physical phenomena and laws for the general reader. In range it is considered to represent the amount of knowledge required for the matriculation examination of the London University.

*An Elementary Treatise on Curve Tracing.* By PERCEVAL FROST, M.A., Mathematical Lecturer of King's College. London: Macmillan & Co. 1872.

THIS is a preliminary treatise on the properties of curves. The author says he supposes himself to be instructing a student whose reading has been confined to very narrow limits. Regarded as a special preparation for a special subject, it may be considered useful in giving clear ideas when the student enters upon the systematic treatment of the properties of curves; especially since the classification of curves according to degrees, and the subdivision of curves of the same degree into species are now being taken in hand by some eminent mathematicians.

*Pocket-Book of Mechanics and Engineering.* By JOHN W. NYSTROM, C.E. Eleventh Edition, revised and enlarged. Philadelphia: J. B. Lippincott & Co. London: Trubner & Co. 1872.

THERE is much valuable matter, both practical and theoretical, in this pocket-book, and hence

its numerous editions. Besides its memoranda, it contains numerous tables.

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*A Treatise on the Metallurgy of Iron.* By H. BAUERMAN, F.G.S. Third Edition: Illustrated. London: Lockwood & Co. 1872.

MUCH information which practical workers of iron, students, and owners of iron mines require, is furnished in this volume in a condensed and portable form, although it is not intended to be classed with the large and expensive works on the metallurgy of iron already published. It contains outlines of the history of iron manufacture; methods of assay; analysis of iron ores; processes of manufacture of iron and steel, &c., and is illustrated by numerous wood engravings from drawings by J. B. Jordan. The author is an associate of the Royal School of Mines. This third edition brings up the work to recent improvements, among which are notices of the Siemens-Martin steel process, and the various plans proposed by Heaton, Ellerhausen, and others. The second edition was issued in America.

## Miscellanea.

**Public Baths and Washhouses, St. Pancras.**—The report for last year of the Commissioners for this Institution has been presented to the Vestry and printed. The Commissioners draw attention to a great advance made during the last twelve months; the progress made during that period having been most satisfactory in every respect. The classification of the bathers for the year ending March, 1871, was—first-class, 52,147; second class, 100,069; and for the year ending March, 1872—first class, 58,054; second class, 107,284. The working expenses have this year been considerably reduced under several heads. In wages the saving is 34*l.* 8s.; and fuel, 37*l.* 17s. The balance sheet shows that 3,032*l.* 2s. 9½d. have been received, and 2,022*l.* 10s. 2d. expended in working expenses, including repairs and alterations, leaving a surplus profit of 1,009*l.* 12s. 7½d.

**Ship's Lines.**—Messrs. Wigham Richardson & Co., of Newcastle-on-Tyne, are making a wide reputation by their care and skill in this respect. Last week the first steamer of a new line, projected by some leading coalowners for the Calcutta trade, was launched by that firm from their yard at Walker. A numerous company was present. The steamer was christened the *Vibilia* (the goddess of wanderers), by Miss Singers, and after the launch she was towed up to Messrs. Hawthorn's shears, at St. Peter's, where her engines and boilers, constructed by that firm, will be put on board. The *Vibilia* has been built to carry 2,500 tons of cargo, her machinery is over 1,000 effective horse-power. The beauty of her lines was a theme of general admiration, and the firm of Messrs. Richardson was warmly complimented on all sides for the design.

**Property in Dover.**—Messrs. Terson & Son have recently sold by auction a considerable amount of property at Dover, Hougham, and Folkestone. We quote some of the prices realised:—Freehold farm buildings at Buckland, containing 2r. 14p., purchased by the present tenant for 300*l.*; two plots of freehold arable land, adjoining the last lot, 17a. 3r. 18p., 995*l.*; six plots of freehold land and two cottages, adjoining the Union-road, Buckland, 34a. 0r. 24p., 1,660*l.*; West Hougham Farm, 142a. 3r. 12p., with farm-house and buildings, 4,060*l.*; plot of meadow-land, 1a. 2r. 18p., adjoining the last lot, 315*l.*; meadow-land and garden, 2r. 20p., in Cherry Tree-lane, 135*l.*; 2a. 12p. of meadow-land, 455*l.*

**Harbour Scheme for Calais.**—Another new scheme for making Calais Harbour available for steamboats of 3,000 or 4,000 tons at all times of the tide, has been brought before the authorities. The engineers are Messrs. Liddell & Richardson. Their proposition is to construct a landing and embarking pier about three-quarters of a mile into the water from Calais, and to connect this pier by a subway from the railway-station. By going so far out into the Channel they will avoid "silting up," and by making a basin for the steamers at the extreme distance they will be able to land in shelter at any time of tide, wind, or weather. It is estimated that the cost will amount only to about 400,000*l.*

**Lectures at the Crystal Palace.**—A series of lectures, under the management of the Committee of the Crystal Palace Company's School of Art, Science, and Literature, have been in the course of delivery in the theatre near the transept of the Palace on Thursday evenings. The twelfth session has been concluded by a lecture from Dr. T. Spencer Cobbold, F.R.S., upon the "Antiquity of Man." He explained that our knowledge of the age of man upon this earth was derived from the evidences of his existence which were found in the drift, in caves, &c., and that astronomy had come to the assistance of the geologist in his endeavour to fix the distant date of the appearance of man upon earth. The post-pliocene geological period was divided into the post-glacial and the [glacial and?] pre-glacial periods, and certain geologists believed the first appearance of man on earth to have been post-glacial; whilst others, who were of the most advanced school, supposed that man had been in this world before the glacial period. There was a good deal to be said for each view of the question, but he thought the balance of the evidence was more in favour of the post-glacial than the pre-glacial view. The difference between the post-glacial and pre-glacial theories of the origin of man was between 50,000 and 500,000 years ago. There were some grounds for believing that man may have been living in the pre-glacial period, say about 600,000 years ago. There was, however, no doubt in the minds of sound geologists that the shortest period must be set down at 50,000 years. He had no desire to attack any religious views, but merely to expound grave scientific truth.

**Public Buildings.**—The vote proposed for the new Courts of Justice will comprise 4,000*l.* to complete the 954,000*l.* for purchase of the site, and a vote of a second sum of 30,000*l.* towards the 750,000*l.* for the erection of the building. There is to be a further vote of 100,000*l.* towards the estimate of 285,186*l.* for new offices in Downing-street for the Home and Colonial Departments, &c., on which above 100,000*l.* have been already expended. The vote for Burlington House is to be 47,000*l.*, leaving less than 7,000*l.* to be hereafter voted to make up the estimated 178,000*l.* The vote proposed for the enlargement of the National Gallery is 50,000*l.*, leaving only 33,000*l.* more to come, in order to make up the original estimate of 92,975*l.* The vote for new buildings at South Kensington is 29,674*l.*, completing the 195,000*l.*, the original estimate. A vote of 40,000*l.* will be proposed for the erection of a Natural History Museum; the estimate is 350,000*l.*, and only about 6,000*l.* have yet been expended. The Post-office requires a vote of 119,700*l.* for new works and alterations, 59,500*l.* completing the estimated 150,000*l.* for the new offices in St. Martin's-le-Grand; 8,000*l.* for a tunnel between the old and the new offices; 26,000*l.* for the new post-office (and the site) at Birmingham; 10,000*l.*, Newcastle-upon-Tyne; 6,000*l.*, Aberdeen; 5,000*l.*, Colchester; and smaller sums for other new post-offices, some serving also for the Inland Revenue Department.

**Improved Cabs.**—The Council of the Society of Arts have turned their attention to the defective construction of London cabs, and have offered a reward of 60*l.* for the best improved cab of any description; two prizes of 20*l.* each for the next two best; and two prizes of 10*l.* each for the next two best. The Council consider that the cabs now in use are defective in various particulars; but it is to be regretted that they make no allusion whatever to the most serious defect of all in the "rickety hansom" *safety* cab. Whenever the horse suddenly falls, both cabman and passenger are liable to be pitched out headforemost. The writer of this, though very seldom in the streets, has seen the cabman thrown upon the horse on two occasions, and once the passenger in a similar predicament. The two wheels act as a fulcrum, and the shafts and body of the rickety "safety" as a lever; and the sudden fall of the horse brings down the shafts with force, throws up the cab, and out its contents. Hansom cabs are thus especially dangerous as well as inconvenient, confined, yet draughty, and uncomfortable.

**The Bridgwater School Board.**—This board has appointed Mr. Hay, of Bath, the architect for the proposed schools in the eastern portion of the town, and has contracted for the purchase of a site adjoining Wellington-road, near the railway-station, for the sum of 400*l.* The execution of the work is undertaken by Messrs. Harvey & Son, of Torquay, whose tender amounted to 1,875*l.*

**Fall of a Wall "founded on a Rock," and Loss of Life.**—A melancholy accident has occurred at Pathhead, Kirkcaldy, in connexion with the erection of a wall adjoining Messrs. Nairn's Floorcloth Works. The wall, which was founded on a rock about 20 ft. from the bottom of an excavation, had been built up about 20 ft. Without giving the slightest indication of insecurity, the whole fabric slipped from its rock foundation, carrying with it a number of masons, and literally burying eight quarrymen who were engaged beneath. A large staff of men at once set about to remove the rubbish, and after some time a young man, a mason, was extricated alive, but died shortly afterwards. Three other men were taken out about the same time. One mason was found to have sustained severe spine injuries; and another to have suffered fracture of the collar-bone. The next discovered was a labourer, but he was fast sinking, and has since died. The bodies of another mason and two quarrymen were afterwards found. Two of the three injured are not expected to recover.

**The London Institution.**—The annual general meeting of this institution was held on Wednesday, the 24th ult., in the Theatre, Finsbury-circus; Sir William Tite in the chair. The secretary, Mr. Thomas Piper, read the annual report, which stated that the circulating library had been augmented by 255 volumes, besides 75 transferred from the general library. During the present season there had been a marked improvement in the attendance at the lectures. One evidence of increased public interest had been manifested in the demand for the shares of the institution. The income for the year amounted to 3,511*l.* 18s. 4d., and the expenditure to 3,039*l.* 9s. 3d., leaving a balance in hand of 472*l.* 9s. 1d.

**Indian Civil Engineering College.**—Some of our readers may thank us for repeating what has been said already in our advertising columns, that it has been determined by the Secretary of State for India in Council that, in the examination for admission into this College intended to be held in July, 1874, and in all future examinations, no candidate will be allowed to compete who shall, on the 1st of the month, have attained the age of twenty. For the examinations in 1872 and 1873, the maximum limit of age will remain, as at present, at twenty-one.

**Value of City Property.**—On Thursday, 25th April, the freehold of a small house in Finch-lane, Cornhill, known as the Cock and Woolpack Tavern, was sold by auction at Garraway's Coffee-house, Change-alley, together with the goodwill of the business, for the sum of 20,800*l.* It is situated on the eastern side of Finch-lane, which runs from Cornhill to Threadneedle-street, and the house has a frontage of 18 ft., with a depth of 55 ft. It also includes two arched cellars under Finch-lane, held on lease, 14 years of which are unexpired.

**Strike in the Sheffield Building Trades.**—The workmen employed in the Sheffield building trades have struck work. They ask for 50 hours per week all the year round in every branch, and that the carpenters' and joiners' wages shall be 7½d. per hour throughout the year. The employers offer 53 hours and 7½d., which the men will not accept, and have drawn off, with the exception of twelve shops, where the concession has been made. The carpenters and joiners of Rotherham have also struck work for a similar advance and shorter time.

**The New Fortifications at Strasburg.**—Strasburg, according to German journals, is to be surrounded by a girdle of eighteen forts, at an average distance of about one German mile from the *enceinte* of the town. Five of those forts to the north-west of the city will be first built. Their construction has been undertaken by various companies of contractors, and are to be completed by the 1st April, 1875.

**Mr. Peek's Prizes.**—The Council of the Institute of Architects have made two supplementary awards in the Peek Prizes Competition, viz., a medal of merit to Mr. Henry Avern, of York-buildings, Adelphi; and a medal of merit to Mr. Walter L. Spiers, of Bernard-street, Russell-square, for the skill displayed in their drawings of Eastbury Manor House.

**Land in Surrey.**—The Middlesex magistrates have agreed to purchase 100 acres of land at Banstead, Surrey, for the purpose of a site for building a third County Lunatic Asylum. The price to be paid is 10,000*l.* Banstead is sixteen miles from the metropolis.

**Words! Words!**—From penny-a-lining some literary men have reached halfpenny-a-wording. Mr. George A. Sala, according to the *Printers' Register*, made a curious contract for writing the "Thanksgiving Number" of the *Graphic*. He was to put together 37,000 words, and to be paid for his task at the rate of a halfpenny a word. It is asserted that upwards of a quarter of a million copies of it were printed. One halfpenny per word, however, was not such very great pay as may be supposed, more especially to a paper which has already yielded 100 per cent. on its capital. Mr. Sala had a heavy task to perform: he had something like a volume to write, in a great hurry, and he got less than 80*l.* for it. A halfpenny a letter would have been good pay, but not by any means unprecedented.

**London Slaughterhouses.**—Dr. Brewer has laid before the House of Commons a Bill enacting that the slaughtering of cattle or sheep by a butcher in his private slaughterhouse, duly licensed, shall not be held to be the carrying on of an offensive or noxious business within the meaning of the Metropolis Buildings Act of 1844. That Act provides that after the expiration of thirty years from its passing it shall cease to be lawful to carry on such a business at a less distance than 40 ft. from a public way, or 50 ft. from buildings of the first or dwelling-house class, save as is provided in that Act.

**Another Thames Embankment.** — Mr. Bean, the surveyor to the Fulham Local Board, acting under the instructions of the board, has just prepared a plan for the embankment of the Thames at the Mall, Hammersmith. The proposal is that this embankment shall be carried out partly at the expense of the Fulham Board and partly by the Metropolitan Board of Works.

**The "Quarterly" and Architecture.**—As the article in the present *Quarterly* has proved very distasteful, and some public writers have misled their readers as to its authorship, it may be as well we should say, though it ought not to be necessary, that Mr. Fergusson had nothing whatever to do with it.

**Employers' Responsibilities.**—A paper will be read at a meeting of the Social Science Association, at their rooms in Adam-street, Adelphi, on Monday, the 6th instant, at 8 o'clock, by Mr. P. H Holland, on "The Civil Responsibilities of Employers to those Injured in their Employ."

**Hanging Paper.**—Carbolic acid is recommended by the *Journal of Applied Chemistry* as an ingredient in the paste used, as it will prevent the annoyance of insects and the sour smells frequently experienced in rooms newly papered.

**Chapter House, Westminster.**—On Monday last, the newly-restored Chapter-house of Westminster Abbey was thrown open to the public, and was largely visited throughout the day.

**Gas Lighting by Electricity.**—In order to ensure as far as possible the safety of the gunpowder works at the Royal Arsenal, Woolwich, the gas-lamps are in future to be lighted by means of electricity.

**The Staffordshire Brick and Tile Makers.** The brick and tile makers of North Staffordshire employed by ten firms have got a substantial advance upon nearly all the articles they are employed in manufacturing.

**Maryport Dock Extension.**—The Maryport trustees are advertising for loans for the construction of a new dock and works at Maryport.

## TENDERS

For villa residence, lodge, gardener's cottage, &c., Worcester Park, Surrey, for Worcester Park Building Company, Limited. Mr. John Giles, architect. Quantities by Mr. Goode:—

| | | | |
|---|---|---|---|
| Manley & Rogers | £4,526 | 0 | 0 |
| Morter | 4,515 | 0 | 0 |
| Henshaw & Co. | 4,404 | 0 | 0 |
| Thompson | 3,930 | 0 | 0 |
| Lathey, Brothers | 3,930 | 0 | 0 |
| Rankin | 3,770 | 0 | 0 |
| Adamson & Sons | 3,736 | 0 | 0 |
| Aviss & Co. | 3,604 | 0 | 0 |
| Hibbins & Tresler | 3,393 | 6 | 0 |

For new farmhouse and buildings, for Mr. T. W. Downes, at Letton, Herefordshire. Mr. W. Chick, architect:—

| | | | |
|---|---|---|---|
| Welsh & Son | £4,995 | 0 | 0 |
| Colman | 4,644 | 10 | 0 |
| Everall | 4,472 | 0 | 0 |
| Thompson | 4,395 | 0 | 0 |
| King & Godwin | 4,380 | 0 | 0 |
| Bigglestone | 4,361 | 0 | 0 |
| J. & W. Bowers (accepted) | 4,200 | 0 | 0 |

For the front portion of new business premises, in the Market-place, Reading, for Messrs. Sutton & Sons. Messrs. W. & J. T. Brown, architects. Quantities supplied:—

| | | | |
|---|---|---|---|
| Lovatt | £4,716 | 0 | 0 |
| Higgs | 4,560 | 0 | 0 |
| Sheppard | 4,219 | 0 | 0 |
| Strong & Son | 4,209 | 0 | 0 |
| Matthews | 3,893 | 0 | 0 |
| Woodruffe | 3,659 | 0 | 0 |
| Barnicoat | 3,609 | 0 | 0 |
| Gibson, Brothers | 3,587 | 0 | 0 |
| Aitchison & Walker (accepted) | 3,555 | 0 | 0 |

For parsonage, adjacent to Holy Trinity Church, in the Barking-road. Mr. Henry Ough, architect. Quantities supplied by Mr. A. L. Buzzard:—

| | | | |
|---|---|---|---|
| Sheffield | £2,636 | 0 | 0 |
| Mortar | 2,323 | 0 | 0 |
| Adamson & Sons | 2,292 | 0 | 0 |
| Eunor | 2,279 | 0 | 0 |
| Rivett | 2,272 | 0 | 0 |
| Shapley & Webster | 2,228 | 0 | 0 |
| Palmer (withdrawn) | 1,850 | 0 | 0 |

For the erection of No. 81, Bishopsgate-street Without. Messrs. John Young & Son, architects:—

| | | | |
|---|---|---|---|
| Ashby & Horner | £2,075 | 0 | 0 |
| Henshaw & Co. | 2,012 | 0 | 0 |
| Newman & Mann | 1,956 | 0 | 0 |
| Brass | 1,897 | 0 | 0 |
| Conder | 1,875 | 0 | 0 |
| King & Son | 1,860 | 0 | 0 |
| Pritchard | 1,858 | 0 | 0 |
| Merritt & Ashby | 1,779 | 0 | 0 |

For stabling, at Henlade, near Taunton, for Mr. J. E. Anderdon. Mr. J. Houghton Spencer, architect:—

| | | | |
|---|---|---|---|
| Davis | £2,000 | 0 | 0 |
| Pollard | 1,790 | 0 | 0 |
| Moss & Rendell | 1,590 | 0 | 0 |
| Shewbrooks (accepted) | 1,520 | 0 | 0 |

For school-house and teacher's residence, for the parish of Norton Fitzwarren, Somerset. Mr. J. Houghton Spencer, architect:—

| | | | |
|---|---|---|---|
| Fox | £954 | 0 | 0 |
| Shewbrooks | 885 | 0 | 0 |
| Moss & Rendell | 740 | 0 | 0 |
| Giles | 694 | 0 | 0 |
| Templeman | 660 | 0 | 0 |
| Manning | 654 | 17 | 0 |
| Macey & Yandell (accepted) | 635 | 0 | 0 |

For Mission Hall, at Kingsland. Mr. H. Shaw, architect. Quantities supplied by Messrs. Plimsaal & Bolton:—

| | | | |
|---|---|---|---|
| Shurman | £589 | 0 | 0 |
| Harper | 547 | 0 | 0 |
| Potter | 540 | 0 | 0 |
| Preedy & Son | 530 | 0 | 0 |
| Robbins & Co. (accepted) | 496 | 0 | 0 |

For re-seating, repairs, &c. of Angersleigh Church, Somerset:—

| | | | |
|---|---|---|---|
| Shewbrooks | £217 | 0 | 0 |
| Rendell & Moss | 196 | 0 | 0 |
| Giles | 180 | 0 | 0 |
| Dinham | 167 | 12 | 0 |
| Hartnell | 160 | 0 | 0 |
| Fox | 160 | 0 | 0 |
| Yandell | 157 | 10 | 0 |
| Templeman (accepted) | 135 | 0 | 0 |

For new business premises, in Broad-street, Reading, for Mr. C. F. Willson. Messrs. W. & J. T. Brown, architects. Quantities supplied:—

| | | | |
|---|---|---|---|
| Barnicoat | £1,800 | 0 | 0 |
| Matthews | 1,700 | 0 | 0 |
| Searle | 1,656 | 6 | 0 |
| East | 1,650 | 0 | 0 |
| Sheppard | 1,640 | 18 | 6 |

For new business premises, in the King's-road, Reading, for Mr. A. Allen. Messrs. W. & J. T. Brown, architects. Quantities supplied:—

| | | | |
|---|---|---|---|
| Sheppard | £1,333 | 0 | 0 |
| Woodruffe | 1,202 | 0 | 0 |
| Matthews | 1,197 | 0 | 0 |
| East | 1,175 | 0 | 0 |
| Barnicoat | 1,160 | 0 | 0 |
| Goswell | 1,097 | 0 | 0 |

For new north aisle and chancel roof to Willesden parish church. Mr. E. J. Tarver, architect. Quantities by Mr. L. E. Riddett:—

| | | | |
|---|---|---|---|
| Jackson & Shaw | £2,938 | 0 | 0 |
| Macey | 2,855 | 0 | 0 |
| Scrivener & White | 2,798 | 0 | 0 |
| Dove, Brothers | 2,795 | 0 | 0 |
| Adamson & Sons | 2,753 | 0 | 0 |
| Shearburn | 2,594 | 0 | 0 |

For making roads and drains on the Eversfield Estate, St. Leonard's-on-Sea. Messrs. Fowler & Hill, architects:—

| | | | |
|---|---|---|---|
| Kenwood | £2,470 | 0 | 0 |
| King | 2,300 | 0 | 0 |
| Bridgeland | 1,880 | 0 | 0 |
| Hughes (accepted) | 1,833 | 10 | 0 |

For alterations and additions to 174, Marylebone-road, and in erecting warehouse buildings at side of ditto, for Mr. Millis. Mr. Alfred Wright, architect. Quantities supplied:—

| | | | |
|---|---|---|---|
| Mitchell | £1,550 | 0 | 0 |
| Watson, Brothers | 1,488 | 0 | 0 |
| Simpson & Son | 1,465 | 0 | 0 |
| Longmire & Burge | 1,440 | 0 | 0 |
| Marsland & Son | 1,437 | 0 | 0 |
| Harris & Sons | 1,393 | 0 | 0 |
| Sharpington & Cole | 1,363 | 0 | 0 |

For villa residence at Chislehurst, for the Rev. Dr. Macduff. Mr. John Norton, architect:—

| | | | |
|---|---|---|---|
| Waters | £4,540 | 0 | 0 |
| Taylor & Sons | 4,031 | 0 | 0 |
| Reynolds | 3,311 | 0 | 0 |
| Niblett & Son | 3,261 | 0 | 0 |
| Carey & Co. | 3,020 | 0 | 0 |
| Adcock & Rees | 3,091 | 0 | 0 |
| Stephenson | 3,082 | 0 | 0 |
| Farrant | 3,023 | 0 | 0 |
| Gooding | 3,000 | 0 | 0 |
| Howard | 2,970 | 0 | 0 |
| Jarrett | 2,966 | 0 | 0 |
| Grover | 2,885 | 0 | 0 |
| Moore & Grainger | 2,827 | 0 | 0 |
| Waterson & Co. | 2,770 | 0 | 0 |
| Aitchison & Walker | 2,645 | 0 | 0 |
| Wright, Brothers, & Goodchild* | 2,595 | 0 | 0 |
| Cook & Co. | 2,582 | 0 | 0 |

* Accepted.

For painting, decorating, &c. at Loxford House. Mr. R. Martin, architect. Quantities not supplied:—

| | | | |
|---|---|---|---|
| Warne | £165 | 0 | 0 |
| Bridgman, Nuttall, & West (accepted) | 163 | 0 | 0 |

For alterations of three houses in Charterhouse-square. Messrs. Tress & Innes, architects:—

| | | | |
|---|---|---|---|
| Hawtrey & Son | £5,123 | 0 | 0 |
| Conder | 4,559 | 0 | 0 |
| Sewell & Son | 4,556 | 0 | 0 |
| Hill & Son (accepted) | 4,264 | 0 | 0 |

For new schools, and schoolmaster's and schoolmistress's residences, at Glemsford, Suffolk. Messrs. Salter & Firmin, architects:—

| | | | |
|---|---|---|---|
| Pearson | £3,614 | 0 | 0 |
| Tooley | 3,400 | 0 | 0 |
| Gibbons | 3,245 | 0 | 0 |
| Grimwood | 3,157 | 0 | 0 |
| Brown | 2,934 | 0 | 0 |
| Scott & Twinn | 2,876 | 7 | 6 |
| Theobald | 2,839 | 0 | 0 |

For rebuilding house, 14, Blenheim-street, Oxford-street, for Mr. Camp. Mr. W. G. Bartlett, architect:—

| | | | |
|---|---|---|---|
| Conder | £820 | 0 | 0 |
| Watson, Brothers | 797 | 0 | 0 |
| Colls & Son | 777 | 0 | 0 |
| Wood | 711 | 0 | 0 |
| Pritchard | 683 | 0 | 0 |

For alterations and repairs at 13, Quebec-street, for Mr. Jones. Messrs. Finch, Hill, & Paraire, architects:—

| | | | |
|---|---|---|---|
| Ward | £326 | 0 | 0 |
| Watson, Brothers | 275 | 0 | 0 |
| Eaton & Chapman | 250 | 0 | 0 |

For schools, at Melyn, near Neath, for Messrs. Leach, Flower, & Co. Mr. John Norton, architect:—

| | | | |
|---|---|---|---|
| Diment | £3,355 | 0 | 0 |
| Rees | 3,343 | 3 | 5 |
| Pearse & Langdon | 3,190 | 0 | 0 |
| Moreland | 2,949 | 0 | 0 |
| Roderick (accepted) | 2,172 | 4 | 9 |

For house for Mr. J. T. Davis, at Bromley, Kent. Quantities by Mr. J. Scott. Mr. T. C. Sorby, architect:—

| | | | |
|---|---|---|---|
| Sharman | £1,444 | 0 | 0 |
| Patman & Fothringham | 1,425 | 0 | 0 |
| Ames | 1,318 | 0 | 0 |
| Pearce | 1,245 | 0 | 0 |

For alterations and additions to 12, John-street, Berkeley-square, for Capt. F. H. Custance. Mr. John Norton, architect:—

| | | | |
|---|---|---|---|
| Holland & Hannen | £997 | 0 | 0 |
| Smith & Co. | 981 | 0 | 0 |
| Myers & Sons (accepted) | 938 | 0 | 0 |

For repairs, painting, &c. at Westminster-chambers, for the Mutual Tontine Association. Mr. George Hall, architect. Quantities supplied:—

| | | | |
|---|---|---|---|
| Lucas, Brothers | £995 | 0 | 0 |
| Wagner | 868 | 0 | 0 |
| Pemberton | 849 | 0 | 0 |
| Fish | 835 | 0 | 0 |
| Foster (accepted) | 787 | 0 | 0 |

For additions to business premises, Milk-street, Cheapside. Messrs. R. Tress & Innes, and Mr. H. Ashby, architects:—

Ashby & Son (by schedule of prices) £10,344

*Camberwell Vestry Hall.*—Messrs. David King & Son's tender for 7,435*l.*, together with two alternative estimates, respectively 109*l.* 13s. and 369*l.* 2s., making a total of 7,913*l.* 15s., has been accepted by the Board for the erection of the new Vestry Hall for the Parish of St. Giles, Camberwell.

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We are compelled to decline pointing out books and giving addresses.

All statements of facts, lists of tenders, &c., must be accompanied by the name and address of the sender, not necessarily for publication.

NOTE.—The responsibility of signed articles, and papers read at public meetings, rests of course with the authors.

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*Advertisements cannot be received for the current week's issue later than* **THREE o'clock p.m.** *on THURSDAY.*

☞ *NOTICE.—All communications respecting Advertisements, Subscriptions, &c., should be addressed to "The Publisher of the Builder," No. 1, York-street, Covent Garden. All other Communications should be addressed to the "Editor," and* NOT *to the "Publisher."*

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| The Police Station, Tower-street, let to the Corporation of London at Ground-rent of | £300 a year. |
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| Premises let to ditto ditto ditto | 120 ,, |
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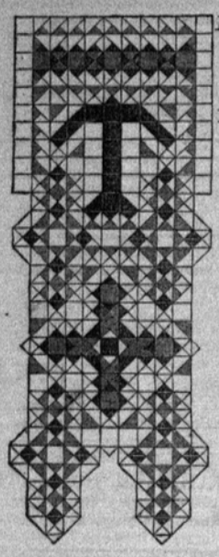
JOSEPH DAW, Principal Clerk.

Sewers' Office, Guildhall, 20th March, 1872.

The Builder.

VOL. XXX.—No. 1527.



## *Notes at the International Exhibition.*

THE arts accessory to architecture are, as we have already noted in the case of stained glass,* but very meagrely represented in the Exhibition, as to quantity at all events. The two life-size mosaic figures exhibited by Minton, Hollins, & Co. (1,070–1), from the designs of Messrs. Hart & Bowler respectively, and worked by female students at South Kensington, are very satisfactory specimens of the art; and the latter of the two is a fine and impressive figure. The former is marred by an indefinable weakness of pose and character. The head of Daniel, from the design of Mr. Stevens, intended for St. Paul's Cathedral, is a very noble one; and the broadly-massed treatment of the lights and shadows is highly-characteristic of and suitable to the material employed. Is the title correct in the catalogue? The head suggests rather David than Daniel. A mosaic portrait of the late Prince Consort, after Winterhalter, executed by Salviati & Co. (1,078), is a capital specimen of what may be done in mosaic in the way of gradations of tone, by the use of small cubes, and negatives the opinion which has been expressed by some critics that mosaic cannot be effective at less than 50 ft. from the eye; though, of course, the employment of this fine mosaic would involve a proportionate expense. A head of Christ, after Taddei, by the same firm (1,074), shows even closer approximation to the effect of painting; but here the real characteristic beauties of the material are, to a certain extent, sacrificed. The attempt to imitate the freedom of painting is as great a technical mistake in mosaic as the imitation of the stiff archaism of the early mosaics, urged by some, would be an æsthetic mistake.

Of painted tile-work and porcelain there are various specimens, some of the best of which are from the designs of Mr. W. S. Coleman. The two painted plaques (1,054), representing nude figures, flatly treated, with conventional accessories and backgrounds, are very pleasing, and show knowledge of the figure. What is the use of the same designer's "painted tile-panels on red ground" (1,001: exhibited by Minton & Co.'s art studio) we fail to see: flowers and birds straggling heterogeneously over a red surface (*à la* Japanese art) are not very available as ornamental accessories, nor good for much in themselves. Two vases from Minton's art studio (1,034) are worth mention as pleasing in colour and form; the classical figure subjects, nearly white on a green ground, are designed with grace and freedom. The reredos exhibited by Messrs. Cox & Sons, a poor piece of commonplace modern Gothic with all the regulation details that we are getting wearied of, is embellished, however, by a painted tile design by Mr. Talbert (1,053) of the Last Supper, which is a very good specimen of the correct way of treating this kind of work, the drapery being drawn in straight precise lines, with no attempt at texture or relief effect, yet not without a certain agreeable sway and balance of line; unfortunately, the faces are far less successful than the general composition, partly we fear from a concession to the foolish ideas prevalent about the treatment of the figure in what is termed "ecclesiastical" art. Adjoining this latter are two very good specimens of metal design by the same artist, in the shape of two elaborate brass lamp standards; a brass font-cover also (upon a poorly-designed font) deserves mention. These are all exhibited by Messrs. Cox & Sons, who also show a specimen of the brass standards with iron base supplied for lighting Luxembourg Cathedral. A case of church tapestry, plate, &c., by the same firm, exhibits the usual things in the usual style; one of the gold vessels is a very elegant specimen of this class of work. Among the metal work, into which we have now dropped, a small silver dessert-stand (2,701) is pretty sure to be looked at, as being the design of Sir Noel Paton, and is a very fine specimen of design and execution in silver, as far as the treatment of the material is concerned; the design is curiously *bizarre* for modern work, a satyr-like figure, with a bird's head, supporting the bowl, while the pedestal on which he stands, and on which a lizard crawls, is in turn supported by three frogs, which look grotesquely out from under it and form the feet. Perhaps it is supposed to be the grotesque character which gives the article its value; we should doubt many persons being willing to give the 200 guineas asked for it. Some of the finest bits of metal work are the damascened articles, tazzas, and vases, by Zuloaga (Spain: 2,714—15. These are exquisitely finished things, in a style of ornament combining something of Moorish richness with classic elegance of detail, and surely in no qualities that should belong to ornamental art are these inferior to the Japanese ornament just now held up to us as the only work in the world worth mentioning. Some specimens of ornamental glass design (claret jugs and glasses, decanters, &c.) on a stand in Room VII. include some very elegant and beautiful work, especially those by Messrs. Hauser & Palme: the Venetian goblet, by Salviati, which surmounts the collection, is one of those things which would be very valuable if it were old, as a specimen of a certain type of work; but we scarcely think its artistic value as a modern production very high: the funny little twists of coloured glass which give the character to it are really curious rather than beautiful. We omitted to mention, in reviewing, in our last number, the work in these galleries on the west side, one of the best specimens of wood-carving there, a sideboard, by R. Jefferson, exhibited by Gillow & Co. (2,762); but, unfortunately, in that French "scroll and Cupid" style, which is really not worth throwing away good workmanship or good money upon, the sight of which, too, in contrast with other articles (already mentioned) with the name of the said firm attached to them, suggests again the reflection we made last year as to the bad effect on ornamental art of using all styles indiscriminately, the same firm turning out anything and everything, from Louis Quatorze to the barest and squarest Mediævalism, without regard to principle or taste of any kind. Why cannot some of our rich and prosperous furniture-making firms collect around them a school of artists of one mind in art, and work out a school of design of their own on definite principles? There would be some chance then of their really benefiting and improving ornamental art and public taste, instead of benefiting, as is too often the case now, nothing but their own pockets and those of their *employés*.

Among the east galleries are scattered some objects of ornamental art of more or less interest. Of these, we are inclined, however profane it seems, to rank the numerous productions of the Sèvres porcelain manufactories, in the French gallery, as among those of "less" interest. That the French artists in this work do all that they aim at, and do it well, can scarcely be questioned; and the great size and perfect make of some of the larger specimens form a triumph of technical skill also. But the feeling for colour betrayed in these specimens of ware is anything but satisfactory; nor were we able to find more than one or two pairs of vases, and those among the smaller ones, which showed any richness or attractiveness in colour. Mostly the tints affected are lively pinks and reds and buffs; in short, the regulation Renaissance scale of colour, against which we have before protested in reference to stained glass. In a great many of the larger vases the artistic design consists mainly of figures, of a "Classical" nature, all of which are respectably delineated, and have a certain sensuous grace and elegance. Why is it, then, that this sort of decoration repels us, deadens our admiration, more than most others? Because, in the first place, these nymphs and Bacchuses are like old "properties" used up long ago; and because also the judgment is not satisfied at seeing figures used merely as elegant objects, adjuncts to a design, without any definite meaning or sentiment attached to them. The human figure, as the highest medium of expression in art, should not be thrown away in this way; carelessly applied as merely so much of a designer's stock-in-trade. Our own decorative artists are arriving at a perception of this, and are either studying the figure better themselves, or getting into the habit of calling in the aid of artists who can treat it worthily. At one end of the French gallery is to be found a casket worth looking at as a piece of delicate and highly-finished work. The decorative portion of this consists in panels of light wood carved in bas-relief, with classical subjects, with many figures and much detail; the figures are only 2 in. or 3 in. high, but the whole is executed with a delicacy, precision, and minuteness of finish very remarkable, and shows also a great deal of freedom of composition and pose in the little figures. The artists are Messrs. Allard & Chopin. In one of the French galleries has been placed a grand piano, from the manufactory of Erard, painted all over top and sides with forest scenery, in monochrome, in some villainous dark red compound. Anything more disagreeable in colour, and more out of place as ornament, could scarcely be imagined; yet the manufacturers evidently think great things of it, and have set a special custodian to take care of it. The mischief was done in Paris, we believe; indeed, the names of the offenders are affixed, but we forbear to give them. What is to be said or done to this kind of work?

In the gallery devoted to Belgium and Russia (the opposite end of the east galleries) are some exceedingly well-executed silver bas-reliefs from the latter country; one in particular of a female figure floating in the air, with flying draperies, which is very charming both in conception and execution: the artist's name has escaped us, and we cannot find it in the catalogue, where (as last year) it is sometimes difficult to find what is wanted. Some gold work from Brussels, in a case not far from the last-named objects, is an unpleasing contrast to the Russian work, and is, in fact, that kind of ornamental work which is almost entirely worthless as art, and which nobody would give anything for were it not executed in gold. Virgil must certainly have been thinking of art as well as of morals when he uttered his celebrated declamation against the "*auri sacra fames*."

In the ground-floor room, reached through the east quadrant, is a considerable though very heterogeneous collection of works from Japan,

* See p. 338, *ante*.

China, and elsewhere. Some specimens of the Japanese *cloisonnée* enamel are to be found, also a good deal of gold and lacquered work, some of the most beautiful description; one gold or gilt casket, with a diaper of very flat foliage over it, is exquisite; and what a contrast to the vulgar gold work from Brussels, just mentioned, or the specimens of English work of the last century exhibited among the "reproductions" in the east gallery! The Japanese tapestries show, too, specimens of their admirable way of representing birds, and equally of their total and absurd failures in the human figure; the attempts at representing the latter appearing like the figures of a nightmare. The Chinese vases to be seen here show (as usual) very fine execution and elaborate ornament, with far less feeling for colour than in the Japanese work; on the other hand, in ornamental tapestry designs (without figures) the Chinese, as far as one can judge by the comparatively few specimens here, have the best of it, both in colour and design, the patterns being chiefly geometrical, but with sufficient variety of colour to avoid monotony. Some of these are well worth attention as suggestions for wall-paper or wall diaper design. In this room is also hidden away one of the best specimens of furniture design in the Exhibition, a buffet, by Vanderschweren (who dates from England), ebonised and with ivory inlays, the lower panels filled with groups of flowers in slight relief, in coloured stones, so as to produce a naturalistic effect not quite in keeping with the rest. An inlaid figure would have been preferable; but this is a very good piece of work, equally pleasing in general design and detail. Adjoining this are two articles, a buffet and *étagère*, both by Rielti (Venice), in a very meretricious style, but admirably executed, the latter, with its boldly undercut scrolls turning from stage to stage, is as fine a piece of wood-carving as we have seen for a long time.

We have thus endeavoured roughly to indicate what there is of ornamental art worthy of notice in this year's Exhibition, so far, exclusive of the jewelry, which may be taken as a separate branch. With this exception, we believe we have alluded to most of the work that is of much consequence, so far as the Exhibition is at present arranged. The Indian Court of last year is as yet closed,—whether it is to be filled we know not; and the French annexe is in a state of chaos,—a jumble of boxes and cases. If these two rooms are eventually arranged, there will be further opportunity of instituting comparisons between some of the best ornamental schools of the East and the West respectively.

## ARCHITECTURE IN THE ROYAL ACADEMY.

THE architectural drawings, which are this year to be found in their old situation in the "Lecture Room," are in the main a very good collection, the best in average merit, we think, since the Academy went into its present quarters. Domestic architecture is the most largely represented, and there is a fair collection of civil and ecclesiastical designs, some of them of exceptional interest. To mention first the great building of the day, we may allude to the very large and finely executed bird's-eye view of Mr. Street's Law Courts design, prepared by Mr. Brewer (1,195), and which shows what the architect's own fine ink drawings could not show, the colour design, if we can so describe the use of a light and a dark tinted stone, in the usual arrangement of quoins and bands. The drawing, however, does not suggest any fresh commentary on the design; nor will the exhibition of Mr. Street's own sketch of the centre portion of the Strand front (1,163), at all avail, we fear, to change the opinion of the majority who are so sadly disappointed with the design, however they may admire the freedom and effective touch of the drawing, which, nevertheless, is certainly out of perspective in some of the details, arches, &c. Among other "civil" buildings is the competition design of Mr. E. W. Godwin, for the Leicester Townhall, exterior front and interior of Council Chamber (1,162 and 1,188); the exterior in the architect's usual style of very solid and massively treated Early Gothic, a good deal like some other designs by the same hand, but with the improvement in this case of carrying the tower wall in an unbroken plane into the masonry below, instead of cutting it off by a cornice run right through, a defect which, in some previous designs, conveyed the impression that the tower was utterly unconnected with the substructural design, and might have been slid backward or forward at pleasure along the whole front. The Council Chamber is an agreeable-looking interior, treated with wall tiling and profuse gilding and colour on the wooden ceiling, which takes the shape of a pointed arch wagon-vault; not a very happy form for wooden construction. Mr. Emerson exhibits (1,177), "A View of a new Mahommedan University at Allahabad," near which is a drawing of the "Rajaram High School," described as in the "Hindoo Saracenic" style, designed by Captain Mant, R.E.: the first of these illustrating an architect's, and the second an engineer's, treatment of an Oriental style; we prefer the former. Mr. Waterhouse exhibits a view of the "Liverpool Seamen's Orphan Institution" (1,173), a picturesquely-grouped building, in his usual manner, and of which we shall give a view; and a small sketch of the "New Buildings at Owen's College, Manchester" (1,213), already illustrated in our pages. The "Hospital for Sick Children in Great Ormond-street," by Mr. E. M. Barry (1,186), is a sensible-looking brick building, also already known to our readers, with outside galleries of communication, and ventilating shafts (apparently) forming prominent features in the external design. It is a good specimen of economical architectural expression obtained in a simple manner. Mr. Seddon sends a large and apparently highly-finished pen-and-ink drawing of his Aberystwith College, which is hung too high to be properly seen for this kind of drawing, but the design is well known.

Domestic buildings are more numerous, and we start here with the name of Mr. Norman Shaw, who is in great force this year, and whose drawings, as drawings, are masterly. "Two Views of a House for F. Goodall, R.A." (1,166), show the architect's usual manner in plain and unpretentious mansions, the usual simple picturesque treatment of windows, and the usual cutting up of roof and walls in a somewhat exaggerated effort at piquant and picturesque expression. The studio, placed (why, we do not see) at an oblique angle with the rest of the building, is a marked feature in the design, indicated externally by the large square side-windows and the end oriel, which ensure light from whichever side it may be required. "Cragside, Northumberland" (1,196), another beautiful drawing, is a house of somewhat more pretention, and treated in the author's very best and cleverest manner; the projecting bay at one end of the front, with its deep base of battered masonry, strongly-marked plinth lines, two tiers of windows, and finishing in what appears to be a kind of open gallery under the eaves, is in itself a feature for study. In No. 1,219 we have sketches on a larger scale of the tower and dining-room fireplace from the same house; the former an admirable bit of masonry design and grouping, the latter too ostentatiously rude and massive to be really in keeping with modern domestic life. "Interior View of panelled Drawing-room, Cowesfield House," by S. Salter, Jun. (1,169), is a capital drawing of an apartment which might easily have been made much more original and picturesque at the same expense; a congeries of square panels (wainscot) over the wall, and thin lines of plaster moulding crossing each other on the ceiling, are features not so new or remarkable as to bring any special credit to their designer, or be worth such a careful drawing. "The Douglas Room in Stirling Castle, restored under the direction of R. W. Billings" (1,181), is an admirable clear sepia drawing of a bit of restoration, by an architect who has made Scotch Gothic his speciality; the piquant effect of the open carved wood cornice, and the treatment of the panels of the wainscot, will not escape notice. Mr. E. M. Barry's "Cobham Park" (1,187) seems to us, for an Italian design, rather too much broken up with small pinnacles, many and various pedimented dormers, &c.; the massive brackets carrying the balconies over one or two of the windows form a good and striking feature. "Wykehurst" (1,203), by the same architect, we like much better; it is a design showing considerable novelty and originality of style, and might be described as Italian treated in a Gothic manner, with high roofs, round turrets with an arcaded open story at top, and a general verticality of line and proportion giving considerable individuality of character. Some of the same features appear in the next design, "Shabden" (1,204). "Wyfold Court, Oxfordshire," by Mr. G. S. Clarke (1,193), is a remarkably-grouped design for a mansion, consisting mainly of a lower and more ornate block to the left, diversified with bay windows, and evidently containing the entertaining-rooms and "show" portion of the house, and an adjoining lofty block, irregularly grouped with the first, of much plainer and more massive character; a portion of this goes up at one angle, forming a kind of tower, with high mansard roof and long lucarnes. The merit of the design could be estimated better were there a plan, to show us the motive and origin of the grouping; but there can be no question that, as it appears here, it is a very striking and picturesquely-grouped mansion. No. 1,210 is a "View of House being erected at Cardiff" from the designs of Mr. Burges (whose name, we may remark, is invariably spelt wrong in the Academy catalogues), a beautifully-executed drawing: the style is a plain, simple treatment of Early Gothic of a somewhat French character, a little heavy, but very solid and satisfactory-looking; the upper windows are square-headed with a centre shaft, and a deep relieving arch over, with a sexfoil light in the tympanum: this looks well enough on the outside, but from the interior the window design would have, we should think, rather a scattered look. "Mansion at Greenlands" (1,208) is a cold, formal Italian block with quoins at the angles, which we refer to because it is so typical a specimen of the kind of house in which the average "respectable" English gentleman delights, the merit of which in his eyes consists in its being utterly without any feature that can attract attention or give occasion for a remark. No. 1,224 is a design for (we conclude) an imaginary "Elizabethan Mansion" by Mr. Heffer: it is a very good water drawing and an elaborately-enriched design, but with no features or treatment calling for special comment. Sir D. Wyatt's "View of Alford House, Hyde Park" (1,222), is a very effective and powerful drawing in sepia (or bistre?), which shows in a perhaps flattering manner the general dignified though somewhat square and heavy aspect of the building: much use is made, and successfully, of ornamental ironwork in balconies and gates; a strongly-marked cornice gives unity to the composition, and is a base to the very steep-pitched French roof above, which forms an important part of the design: we wish there was not such an array of great carved festoons under the cornice; what, let us seriously ask, is the gain to the building for the time and expense that must have been bestowed in carving this used-up ornamental feature all round? Mr. H. Jones's "Additions to the City Meat Market" is in keeping with the main structure which he carried out previously; and is as like a meat-market as blank walls and pilasters can make it. Mr. G. Aitchison shows a small and unfortunately rather feebly-executed pen drawing of a "Proposed House for Lord R. Grosvenor, Dorset" (1,233); the design itself, like most of the author's, shows some originality of manner and treatment, with a considerable employment of what appears to be pierced woodwork; but it certainly wants more force and breadth of treatment to make it a successful work. "Messrs. Elkington's New Premises" (1,241), by Mr. F. Peck, an Italian design presenting nothing special in detail, is well and effectively grouped with two high blocks, not symmetrical, divided by a lower intermediate portion lighted from the roof; at least, we assume that the whole of the block of buildings shown is included in the establishment. The "Hall and Staircase at Summerfield, Roehampton" (1,239), by Mr. Brydon, is noticeable as a capital pen-and-ink drawing of good plain work, with no striking features. Two small drawings by Mr. Edis are up to his usual mark; a "House at Bexley" (1,161) and "Riverside Premises, St. Paul's Wharf" (1,180), the latter a capital specimen of simple architectural treatment of a utilitarian building, and in point of execution one of the best, though among the smallest drawings in the room.

In ecclesiastical design there is less than usual of that class of "regulation Gothic" churches, one of which can hardly be distinguished (in the memory at least) from another; and there are one or two rather remarkable specimens. First among these we must again mention Mr. Norman Shaw, whose "View of the English Church at Lyons" (1,194) is, in fact, a drawing of one gable end only, towards the street; perhaps the rest is crushed up between adjoining buildings after the manner common in French towns. This is a rather large scale drawing, showing a bold and massive treatment of a tall gable, with wide buttresses on each side, crossed at the top by a lower gable parallel to the front, one end of which is octagonal on plan, and forms the finish to the stair-turret, the treatment of which

feature is an excellent specimen of real masonry design; the whole thing, indeed, is like a bit out of the Middle Ages, without, however, suggesting direct plagiarism. "Interior View of Trinity Church, Finchley New-road" (1,158), by Mr. Legg, is a good brick interior, with a canted wooden ceiling and solid curved braces; which, albeit not a very good way of treating timber constructively, is one which certainly produces more pleasing lines, and looks better generally, than the thin moulded tie-beams which some church architects are getting so fond of, and which are shown in one or two other designs here, accompanied by that kind of scribbled line decoration all over the walls which is so easily devised, and demands so little thought in the devising. Mr. Hakewill's brick church at Brompton (1,175), with the tower detached from the main design, and only connected by a short cloister, is not its author's best work. The "South-east View of Church of St. Augustine, Kilburn" (1,202), by Mr. Pearson, is a somewhat remarkable thing. It is a fine pen-drawing of (apparently) a brick design; the whole character extremely bold and simple: the west end flanked by two square towers, perfectly plain in the lower portion, with only one story of wall arcading below the cornice, over which each is finished with a square slated spire. Behind these rises a *flèche*, and still further, over the nave-roof, is seen the main tower and octagonal slated spire, with very good picturesque treatment at the point of junction, and lucarnes near the base of considerable originality. From the point of view here shown, this is a very fine group of building. Another of the more notable church drawings is that by Mr. Burges, of the "Memorial Church at Skelton" (1,217), a small, finely-executed water-colour of the interior view of the nave. The best point in the design is the arrangement of deep, recessed panelling and sculpture in the surface of the east wall of the nave, over the chancel-arch. The same architect also exhibits a highly-coloured interior of the "Chancel of St. Mary the Virgin, Studley Royal, Ripon" (1,242). Mr. Goldie's "St. Paul's College Chapel, Stony Stratford" (1,223), is a view of an interior, plastered (or cemented), and with red brick dressings and brick wall-shafts, carrying a plain tie-beam, looking, in the drawing, almost like a piece of rough timber: as Sir Hugh Evans said, "this is affectations." In other respects, this is a satisfactory design. A bird's-eye "View of St. Peter's, Clerkenwell," showing church, parsonage, and schools, by Mr. Blackburn (1,226), is hung too high to be properly made out. It looks well. "St. Mary's, Loughton," by Mr. Watson (1,215), is a very pleasing specimen of a small country church, with a red-tiled roof, picturesquely treated, without the slightest pretension or straining after effect. Then we come to an interesting design, in regard to the associations connected with its locality, &c., Mr. Street's "Proposed English Church at Rome" (1,216). Uninitiated eyes might say at first that this was one "design for a barn," so far has the architect of tried his recent tendencies towards plainness hat treatment; but there are character and expression about it. The side elevation shows single-light windows between deep buttresses. The east end is an apse, without buttresses, and with the roof-line broken by a series of rather low-pitched gablets all round, not very happy in effect. A square tower, with a low pyramidal roof, is the prominent feature, and a somewhat heavy-looking square porch adjoins one bay of the south aisle, the porch-walls coinciding with and forming part of two of the buttresses. The one piece of ornament is a string of decorative wall-panels carried round under the sills of the windows. Certainly anything like "fritter" would have been out of place in the "Eternal City," but we cannot help fearing that Mr. Street, in avoiding the Scylla of over-decoration is in danger of falling into the Charybdis of dulness.

Among what may be termed decorative designs we have an elaborate drawing of an interior, by Mr. Talbert (1,201), showing a "Design for a Fireplace," deeply recessed beneath a segmental marble arch, with wall-tile decoration above. The whole effect is very good; but the carved foliage seems too large and heavy for the scale of the rest, and rather spoils it. "The Interior of St. Stephen's Church, Dulwich" (1,211), by Messrs. Banks & Barry, may be counted among the decorative designs, as the main object is to show the proposed colouring, which seems to us somewhat gaudy and with too much preponderance of light blue in the chancel roof and elsewhere. "A Design for Sideboard Decoration" (1,214), by W. S. Stacey, is the work, we suppose, of a connexion and admirer of Mr. H. Stacey Marks, whose characteristic style in this kind of design is here attempted to be imitated; not very successfully, we think. "The Queen of Sheba's Visit to Solomon" (1,240) is not a bad piece of conventional figure grouping, with a good effect of colour. Some small painted windows for the apse of the church at Fishponds, Bristol, by Mr. J. P. Seddon, are very good in colour, with red and green diaper grounds alternately; the figures much like most figures in stained glass windows.

Among drawings which are not designs, but sketches of existing work, may be mentioned five of Mr. Spiers's capital series of sketches among the ruined buildings at Paris, the style and merits of which are known. Mr. G. R. Clarke's view in Westminster Abbey is a fine drawing, careful and successful in realising the effect of light; of the same character, and perhaps better, is "Seville Cathedral" (1,197), by Mr. George. Mr. Brewer has a good architectural oil painting, "Aus Alten Zeiten" (1,192); and Mr. Deane a very picturesque view in Verona (1,200), looking up a street, under two large arches, to more distant buildings. Mr. Naish's "Interior of Speke Hall, Lancashire," with figures in old costumes (1,170), is a very good specimen of the kind of thing, carefully and minutely finished, both as to light, effect, and figures. Mr. Florence has two small Continental sketches, of which "Study in Mantua" (1,182) is the best. We must not pass over a decidedly fine drawing by a foreign name, F. Hoffcauer, called "The last Five Days of Pompeii" (1,236), in reality a painting of the entrance of a Pompeiian house, looking *from* the interior, which is comparatively in shadow, out into the sunlit landscape; the architectural decorations and the effect of the polished marble in walls and columns are very successfully given. As a contrast, we find on the opposite wall, just facing this, the "View from the Tunnel Mouth of Metropolitan District Station, under Victoria-street;" a well-executed drawing, sent, we suppose, to show to every one how hideous a locality may be made by the aid of modern engineering science.

On the whole, this is a very fine and interesting collection of drawings, which we have had pleasure in passing under review; the proportion of designs which have no interest, or are of a very common-place description, is much smaller than in most collections of the same kind that we have seen during the last two or three years.

## NEWINGTON COMPETITIONS.

WE mentioned in our last the award of the premiums for designs sent in for the proposed new Church of St. Mary, Newington. The various sets of drawings were on view last week in the committee-room of the Newington schools. The main points in the conditions of the competition were that the church was to seat 1,100 persons, and the cost to be 10,000*l.*, or not to exceed 10 per cent. on that sum; in other words, to be between 10,000*l.* and 11,000*l.* This was exclusive of any tower or spire, for which a separate estimate was to be given.

The design to which the first place has been awarded is by Mr. J. Fowler, of Louth; the style is "Early English" (lancet), of a very solid sterling character, and showing true comprehension of and feeling for this style of architecture, but not presenting any novel or very original treatment either in plan or design. The side elevation is very simple, with single lancet windows between simply-treated buttresses; the west end shows a triplet of large windows, flanked by a similar blank window on each side; the tower is treated very plainly in the lower stages, with a little enrichment by straight-lined canopies and traceried spandrels over the windows in the bell-story; the spire is very pleasing in proportion, but the composition at the junction of tower and spire appears somewhat crowded. We should suggest separating the lucarnes a little more from the angle turrets and broach pinnacles. The roof is carried by rather heavy but not ineffective timber principals, with curved braces forming a large trefoil arch. The plan is spacious, and shows in particular plenty of spare room at the west end to provide against crowding on leaving the church, and also for services around the font. On the whole, we are not surprised at a committee choosing this design, as it is a very sensible and practical one, with sufficient architectural merit; but there is nothing remarkable about it.

Mr. Pearson's design, the second chosen, disappoints us, and is scarcely what we expected from him. The very lofty tower and spire would form a striking feature; and the tower is finely treated, carried up in the lower portion in almost an unbroken mass; the spire, also, is very satisfactory; but the stage between the two, the most important point in the design, is decidedly weak, and this is rather the character of the work throughout; the plain portions of the work are broadly and simply treated, the windows and details of tracery, &c., are weak and starved-looking. The west end is more boldly treated, with three large two-light windows, and a relieving arch spanning the whole, abutting against the turrets which flank the composition; another small window occurs within this arch, over the heads of the others, but the composition is somewhat ragged here, and does not combine naturally. The walls are of red brick and Bath stone, the roofs to be entirely vaulted with stone ribs and brick filling.

In the third design, by Mr. Blomfield, brick is again substituted for the Kentish rag suggested in the Instructions for the outer walls; the dressings to be of Bath stone. This arrangement of brick and stone dressings always militates against the homogeneous and monumental character which we like to see in a church; but the design is a good one, with considerable originality, especially in the treatment of the upper portion of the tower, the upper stage of which breaks into an octagon, and is finished above by a short octagon slated spire, with picturesque angle pinnacles: this would have been still more effective had the lower portion of the tower been treated with rather more unity and severity of design, and carried up with little break or incident until the octagon stage was arrived at. The author knows how to ensure dignity and solidity of character by binding his masses of wall together in continuous planes: this is well done in the treatment of the large buttresses which flank the "crossing," and which run into the main transept walls on each side, the north transept assuming the form of a "lean-to." The roof is a wooden tie-beam and king-post construction, with a canted ceiling over; the interior proportions are spacious and lofty, but the plan is somewhat cramped, especially at the west end. On the whole, we should call this a better design than Mr. Fowler's, but not so serviceable a plan.

Mr. Brooks's design is much the finest, architecturally,—the only one of the set which exhibits anything of what may be termed the great qualities of architectural design. It is plain, even stern, in character, and with the small windows which the architect has persuaded himself give light enough,—an opinion we should be inclined to question. The main feature in the design is a tower of almost disproportionate width and massiveness, carried up to a considerable height, broken into an octagon in the upper portion (there are no "stages" here), with large flanking turrets, and with a short, massively-proportioned spire, forming an appropriate termination. On this same tower the architect has wrecked himself, as far as this competition is concerned; its cost being regarded, apparently, as quite disproportionate to the rest of the structure. There is a plain moulded cornice to the exterior, the only bit of external "ornament" being a little carving in the corbel-table of the spire. A flèche adds another feature to the exterior, and breaks the heavy lines of the composition. The general outline of this object is very good, but the details want reconsidering and refining. The plan is rather obstructed by the large piers at the crossing. The south aisle of the chancel is arranged (with an apsidal termination) for occasional use as a chapel for early morning services, or on occasions when only a small congregation might be expected. The crossing and the portion eastward of it to be vaulted; the remainder timber-roofed. The organ is absurdly placed,—a little thing bracketed out high up on the wall, only large enough for a church one-third the size. A big church requires a big organ, if the grandeur of the music is to be proportionate to that of the architecture. Why cannot church architects learn this, and arrange accordingly? *Au reste*, we look with some regret on the non-success of this design. It may not be a very practical one, but the tower would have been a grand object, and worth paying, as Pugin said, "thirty shillings extra" for.

The design by Mr. H. Jarvis is one with con-

siderable faults; the design of the tower is very unsatisfactory, the details generally are not in very pure taste, and the whole composition is too heterogeneous in manner, wanting in unity; one part does not seem to belong to another. There are, nevertheless, very decided merits which deserve recognition; the treatment of the side windows (clearstory) is decidedly effective; so is that of the narthex which crosses the west end, the two ends of which are worked into octagonal apses which contain the stairs to the west gallery. The chancel is groined, and is loftier than the nave, an arrangement which we are not prepared to say is not the truest architecturally, as giving a better effect of climax to the internal composition; externally it is difficult to treat satisfactorily, partly, perhaps, on account of the prejudice acquired by the eye in favour of the other arrangement. The last design to be named by Mr. Bignall scarcely affords room for comment; it is sufficient to say that it is a modern Gothic design of an ordinary type, and neither better nor worse than many others of the same kind.

Five designs for a "Mission Church" for the same neighbourhood, to seat 600, at a cost of from 3,500*l.* to 3,750*l.*, were exhibited at the same time. The first chosen of these, by Mr. J. E. K. Cutts, is a plain, sensible, brick design, of no particular merit architecturally, and which we fancy owes its place in the lists a good deal to the exceedingly neat and effective drawing of the elevations. The second one, by Mr. J. Giles, is, on the whole, a more pleasing design, with an effective timber roof with deep carved braces; the nave arches, with flat soffits, springing from coupled shafts or pedestals; the material is brick inside and out. The apsidal east end is spoilt by an over-attempt at decorative effect in the shape of interlacing arches with ornament of some kind in the spandrels and interstices; the result is not happy. The third design, by Messrs. Giles & Gane, is a single-span building, looking very squat, but, of course, providing a very good and unencumbered interior area; a reminiscence of the three-aisled arrangement is presented by the manner in which the east gable wall of the nave is carried upon a large centre and two smaller side arches, springing from circular piers. The gable, as in the other two designs, is surmounted by a brick and stone belfry; an alternative slip shows a second treatment of the east end, much superior to that in the main drawing, and with a light timber belfry and flêche substituted for the brick one; this helps the design wonderfully, and carries off its squareness and low appearance: we wonder the other designers have not tried the same thing; they would have got a far better and more picturesque effect (quite suitable to a small building) in this way, than by the conventional pigeon-hole belfry. Messrs. M'Murdie & Wagstaff's is a design in buff brick, and red brick dressings, out of proportion in its parts, and looking more like a model of a larger church than a design for a small one; the turret over the entrance is pretty and picturesque in outline, but has the great misfortune of being lower than the gable adjoining. The design of Mr. Wiggington is so barely shown in a mere outline drawing, that it is in no position to be fairly compared with the others. We may take the author's own estimate, however, on the presumption that he would have taken more trouble with it if he had thought much of it.

We should have been more interested in the competition designs for the larger church (to revert for a moment) if any one of them had shown any marked attempt to adapt architecture (plan in particular) to the real requirements of modern worship. Of this there is scarcely a trace; and the design which has been selected as the best, and which we suppose will be carried out, is, though without any serious defects, as completely destitute of anything like novelty of suggestion, and indication of progress in architecture, as could well be imagined.

## THE DOGE'S PALACE AND THOUGHT IN THE WORKMAN.

IN these days of artistic and architectural change and uncertainty, and in which we cannot be sure, even for a few months, what will be the next phase and fashion of art, it is some comfort to think of a few *principles* of artistic action and ways of doing things which are and must ever be, always and absolutely certain. Happily there are a number of such principles, and without at present attempting even a list of them, we may adduce one, viz., that of the absolute necessity of *bona fide* and *individualised* work in the *details* of buildings laying claim to architectural excellence. In other words, it is not the mere workman, as part of an apparatus, or as a machine, however good a one, that is needed for the work; but the *artist-workman*, or the yet higher artist that is demanded. Style itself, important as it is, is yet, after all, but a matter of almost secondary interest to this vital pinciple, for who would not rather become the possessor of a fine building, nobly and truly worked out, with studied and impressive details, in a second-rate architectural style, than to have one, even in the very noblest and best of styles, if in detail but the work or result of mere copying and *machine*-made work. There can be no comparison between them. This important subject has been but little, if at all, dwelt upon or recognised, yet is it one of the vital questions in art and architecture—the art and architecture of the future.

We have been led to these thoughts by some curious examples, which we have collected of the painstaking and thoughtfulness and skill of the artist-workmen of past times. Nearly all old buildings exemplify this, but perhaps there is not one of them fuller of it than the far-famed Palace of the Doges, of which so much has been written and sung. The very name seems enough, for round and about it, even apart from any technical knowledge of the architecture of the building, there clusters a host of memories and associations. What would this practical world of to-day do, we may ask, without at least a little dreaming and waste of active energy? It must die out from mental weariness, for human nature cannot live solely on the merely "*utilitarian*" and the profitable! But our purpose here, as usual, is not to dream, but to ask, whether so much could have been made out of this world-famous palace, had—all its uses and history having been the same—it been a structure of the ordinary machine-made modern type, the *artist-workmanship* of it, as that is now, being absent. Would this palace with its columns, carved capitals, and arcades and diapered wall face, have produced the same effect on men's minds if *art-manufactured?* We confidently declare that it would not and could not; and it becomes, therefore, not a little interesting to discover how and in what way it was that such mental effects were produced. There is all the difference between something and nothing, between such work and mere machine work; and it would, perhaps, be impossible to point to anything more instructive in its way than to the carving and *thoughtful workmanship* to be found in the *capitals* of the columns of this very palace. Each capital would seem to have been a study in itself, and to have been wrought out after a careful thinking out of how it could be made to harmonise with the rest of the capitals, and at the same time to be an individual thought in itself. All this has been done in the most thoughtful manner: each cap is a new design, both in the upper arcade range of columns, and in the lower and larger columns which stand on the street pavement. There are not a few specialities which we could point out, after a good deal of study, in these capitals and columns; and there is one most notable bit of detail in one of the capitals of the lower range which is not only curious in itself, but as indicative of the age in which such work was done, and as showing how much individuality of thought and painstaking was expended in *one single capital* of one single column, out of a vast series. We refer to the one which Mr. Ruskin has named the eighteenth, and which he has described to a certain extent, as will be seen in one of the volumes of the "Stones of Venice." The singularity in it is a Latin inscription, or rather Latin verse, carved on the *abacus* of the capital. This abacus is octagonal on plan, though the column on which the capital stands is circular. On the capital itself the compositions of animals and figures are descriptive of the Signs of the Zodiac, so that we may call it the "astronomical" cap. There is,—to give a mere list of them,—on one of the sides of the octagon which we will call No. 1. The Creation of Man; on No. 2. Saturn and the Water-Bearer (*Aquarius*); No. 3. Jupiter, the Fishes (*Pisces*), and the Centaur; No. 4. Mars, the Scorpion (*Scorpio*), and Aries; No. 5. Leo and the Sun; No. 6. Venus, the Bull (*Taurus*), and the Balance (*Libra*); No. 7. Mercury, the Twins (*Gemini*), and the Virgin (*Virgo*); and on No. 8, completing the octagon, the Moon and the Crab (*Cancer*). All these little ingenuities to be thought about and cleverly carved on *one* capital! Why, there is as much to puzzle over and think out as in all the details of a good-sized modern church, for having these quaint ideas in words, it was necessary to think a good deal to work them out and embody them in actual forms. Indeed, it may be a question whether the rough thinking out and working out of all this is not quite as much of a mental and artistic effort as the designing a Parthenon capital, with all its subtlety of curves and blending of them with straight lines, or rather lines which are meant to look straight. And this is, it is to be recollected, but one single capital out of a long series,—a combination, indeed, of architecture and sculpture. We might describe at some length the various sculptures, eight in number, which go to make up this clever capital, but as there are a number of fragments of it in the Architectural Museum collection, it will be merely necessary to call attention to them, that the reader may refer to the work itself; and for this other reason, that our present remarks refer more especially to the "inscription" or text on the abacus, and from which the subjects themselves are taken. This inscription is thus written; we copy literally both *spelling* and *contractions*:—

DELIMO DSADA. DECO STAFORMAVIT 7 EVA.*

This may be thus put into modern shape:—*De limo Deus Adam de costa formavit et Evam.* The Lord formed Adam of Dust, and Eve of a rib. (We take all these inscriptions from casts taken from the capital itself. They are letter by letter accurate.)

On the next face, reading from left to right:—

ET SATVRNE. DOMVS EGLOCERVNTIS 7 VRNE; or *Est Saturne domus Aegocerotis*† *et urnæ.* It is, O Saturn, the house of Capricorn and of the pitcher.

No. 3. INDE IOVI DVNA. PISES SIMVL ATQ?. CIRONA; or, *Inde Jovi donant, Pisces simul atque Chirona*: Next they give to Jupiter, together with the Fishes, and Chiron.

No. 4. Ē ARIES MATIS. 7 ACVTE SCORPIO PARTIS; or, *Es aries Martis: et acutæ Scorpio partis.* Thou art the ram of Mars: and thou Scorpion, with sharp limb.

No. 5. ES DOMV SOLIS. TV QVOQ? SIGNE LEONI., or *Es domus Solis, tu quoque signum Leonis.* Thou art the house of the Sun. Thou art also the sign of the Lion.

No. 6. LIBRA CV TAVRO. VENVS .T PVRIOR AVRO. *Libra cum Tauro, Venus et purior auro.* The Balance with the Bull, and Venus purer than gold.

No. 7. OCCVPAT ERIGONE. STILBONS GEMINUQ? LACONE. *Occupat Erigone, Stilbo, Geminique Lacones.* The Virgin comes next, Mercury and the twin Laconians.

And No. 8, and the last, and which completes the octagon, LVNE CANCER DOMV. T. PBET IORBE SIGNORVM. *Lunæ Cancer domus, tunc præbet in orbe signorum.* Cancer, the house of the Moon, then showest thyself in the circle of the Signs.

Thus in these curious and quaint lines did the able sculptor of this capital find the subject for it, and the rude *lettering* will show how little seems to have been thought of that precis and exactitude which characterises mod work. Letters are misplaced or left out, just suited the bit of stone in which they are incis *The idea was everything.*

It would, perhaps, be impossible to find in the whole range of Gothic art any one single object affording greater proof of the great principle of individuality of work, which always characterised it, and which, indeed, made it "Gothic." No two things were alike; each one had its workman, and that workman was expected to *think* as well as to *work*; and there can be no manner of doubt that one of the great charms of the Doge's Palace is to be sought for in this individuality of workmanship, and in the fact of the workmen of it being *artists*, but still *workmen*. In this fine capital—but still but one out of so many—the sculptor seems to have wished to embody, as far as in him lay, the formation of the planets made for the service of man; the subjection of the fortunes of man to the will of a higher power; and as determined from the time when the earth and the stars were made. What a great lesson for men modern is here; for, if so much thought and work has been expended in the production of one single bit of what many would think insignificant detail, what are we to think when we know that the whole of a vast palace is full of it,—full of thoughtful and real artistic work, every part and

* The mark 7 stands for *et*, and.

† This word is a mere transcription of the Greek word corresponding to Capricorn.

detail a study? Compare this for a moment with a modern "restoration," wherein the whole of the work, however carefully done, is all mechanical, and foreign to the heads of the executive workmen. How much is there yet to be done before the real idea of art, as the expression of individuality in material forms is seen, and grasped, and realised! No amount of skill, as it seems to us, in mere designing,—no determination of style, whether Classic, or Gothic, or any other, can avail without this recognition of the vocation of the workman; and this Venetian palace is of those buildings which go to prove this artistic value of the workman. But in this little fragment of antiquarianism, out of which grew so pretty a bit of sculptured form, there are yet one or two things to be remembered to enable us thoroughly to comprehend it; and in an antiquarian view of the matter, it is of infinite importance to do so. Two things are to be kept clearly in mind. First, that each line is a sort of rude hexameter keeping the rhythm, but disregarding the rules of prosody. Secondly, that each line consists of two parts, which rhyme together; and in order to secure the rhyme, any liberties are taken with the terminations of the words. Thus, as we have said, the idea was everything: the rhyming lines satisfied the ear, the sense being well known. We have ventured to call this beautiful capital the "astronomical cap," but perhaps it should rather be the "astrological" cap, for the stars at one time dwelt in "houses." Full of errors, doubtless, were the men who thought thus, and did these things, and the like of them; and, as far off are we moderns from them in scientific knowledge as astronomy is far off from astrology. But one thing they of that distant day most certainly had, which we have not, and can never have, as things now are; and that was, the time, and temper, and working power to make practical use of their dreamings, and to embody them in sculptured and painted forms, and thus to write legibly *their* world's history—the history of things as they then were.

## SCHOOL PLANS FOR THE LONDON SCHOOL BOARD.

We have already briefly referred to the designs sent in competition, by five architects, for the schools proposed to be built in Johnson-street, Stepney.

The "Instructions to Architects," as we understand, made the following provisions:—

1. The School to be for 1,080, in three equal departments of boys, girls, and infants, and arranged on the principle of class division (sometimes called the Prussian system).

2. The Boys' and Girls' Departments to be arranged in twelve class-rooms, each accommodating sixty children, and having an area 9 ft. superficial per child. A general room to be provided for the assemblage of the whole of the boys and girls at one time, calculated at not less than 4 ft. superficial per child, and available for one of the classes. This room to be used as one of the twelve class-rooms. One of the rooms to have a top light, suitable for a drawing-class.

3. The Infants' Department to have two class-rooms for sixty each of the youngest and more advanced, and a general room for the remaining 240 children. These rooms together to have not less space than 8 ft. superficial to each child.

4. Generally.—The class-rooms to be not less than 13 ft. high. Provision to be made in each department for masters' and mistresses' rooms and W.C.s. Each department to have separate out-offices (approached, if practicable, by covered ways), lavatories, cap and bonnet rooms, playgrounds, entrances, and stone staircases. The building to be not less than two nor more than three stories high. A care-taker's residence of two rooms to be provided. The views of the Committee of Council on Education to be carefully considered in reference to structural detail not herein described.

One of the competitors, Mr. T. R. Smith, in his descriptive particulars, says that the principle of class division in schools, sometimes called the Prussian system, is carried out in Prussia, at Berlin for example, much as follows:—The children are entirely taught in class-rooms; the maximum number recommended in a room is sixty, seventy being considered an exceptional number. The class-rooms are oblong; it is indifferent whether they be lighted from the end or the side, but they must be lighted from one side only, *and the children must have their light on the left hand.* There seems no limit to the depth from front to back of a block of seats, but the length of each bench is so limited as to allow the master to inspect every child's work from the end of the bench. For the purpose of facilitating this inspection, a gangway is preserved all round the block of children, narrow at the back and at the side nearest the windows, but made wide enough next the wall facing the windows, to be convenient for the ingress and egress of the children; and the block of seats is broken up into at least two masses by an additional narrow gangway from front to back. No child, it is thought, ought to be more than 30 ft. from the easel where diagrams, &c., are shown, and it is recommended that, as far as possible, the seat most remote from the window be not further from the wall than 1½ time the height of the top of the window from the floor. The master's desk, on a slightly raised platform, faces the block of children; an easel for the display of diagrams, a book-closet, and the stove or fireplace, occupy the space on either side of him.

The class-rooms, it appears, are ordinarily put together so as to form a compact oblong block of buildings several stories in height, and are frequently divided on plan into three portions by two staircases extending from front to rear; one of these is for boys and the other for girls. These staircases, however, often occupy the ends of the block, and sometimes a corridor connects them together; but this is sometimes omitted. On an upper floor, and between the two staircases, is placed the Aula, or general room, calculated to seat about half the number of children provided for in the class-rooms. This room generally receives some amount of architectural decoration; it is not customary for it to be divided by movable partitions or other means when not in use for collective teaching. Private rooms for the teachers, and sometimes one or more consultation-rooms, complete the essential parts of the building, which is heated and ventilated on a general system.

The principle of a side-light referred to has been adopted by all the other competitors but one, Mr. H. S. Snell, who gives a quotation from the reported evidence of Mr. Adolf Sonnenschein before the Committee of the School Board for London, as to the Prussian school system, to show why he has placed all the children with their backs to the light:—

"The class-rooms each contained a platform, on which were placed a black-board and the teacher's desk and chair. All the children faced the platform, and *the windows of the room were at the back of the children*, so as to give each the benefit of a full light."

It is somewhat strange that such a difference in opinion should exist on a matter of fact. For our own part, we see no reason for forcing children here to stand in their own light, even if they do so in Prussia.

As to the best size for the class-rooms, while Mr. Smith arrives at the conclusion, after careful examination, that one 20 ft. by 27 ft. gives the best results, whether end-lighted or side-lighted, and whether seated for junior children at 18 in. per child, or for senior ones at 22 in., Mr. Snell makes them each 26 ft. by 21 ft., and Messrs. Harston have some 25 ft. by 20 ft., and others 27 ft. by 20 ft.

The latter make the approach to several of their class-rooms from the central hall, the other two competitors of whom we have spoken give all their rooms an approach independent of the central hall.

The committee should take evidence on these points before making their selection.

The other two designs seem to us to have fewer points to recommend them than those we have named.

## VESUVIUS.

EIGHTEEN HUNDRED years and more have passed since Vesuvius vomited its ashes, mingled with rain, on the beautiful city of Pompeii, and buried it with its accumulation of treasures of art from the sight of man, till the present century. And now again has the Mount, that still stands like a threatening avenger, made its voice heard from the depths and sent forth its pent-up fires, threatening the very capital of the South itself with destruction. Science, in the shape of its sismograph, gave no warning; the oldest and most intelligent of guides—men born and bred up on the lava-clad slopes—knew nought of the approaching awful danger.

The afternoon of the 23rd ult. began the wonderful spectacle, without warning of any kind. Signor Palmieri, stationed at the Observatory, perceived no motion of the sismograph,—an instrument so delicate that the slightest volcanic motion at other times could be marked by it. By eight o'clock of the evening of Wednesday, the mountain had opened orifices here and there on all sides, sending down rivers of lava, thrusting out tongues of fire long and broad, appearing here and disappearing there, like some gigantic process of illumination of a vast amphitheatre.

The sea, just slightly rippled, reflected the pallid light of the moon and the kindled streams of lava. As the cones of lava were lighted up, the volcano seemed alive, and threatened terrible consequences. All the night the affrighted inhabitants of Torre del Gréco (built on the ruins of Herculaneum) watched on the house-tops, with anxious eyes, the spot whence issued a new menace of destruction of their town. Theirs was not the gaze of curiosity, but of deep, anxious, fearful presentiment. The morning of Thursday, the volcano appeared calmer, but in the afternoon broke out with increased vigour. Thousands rushed to the shores of the bay to see the sublime spectacle. Caravans of the curious, of both sexes, started to Resina, "to begin the weary ascent" of the mountain, defying all danger, forgetting what destruction Vesuvius had wrought of old. And between the hours of four and eight on the morning of Friday, with horrifying sounds, it broke its hard crust, and under the feet of those most advanced on their perilous ascent opened up a deep gulf, and on their heads poured torrents of lava, while above hung a deep roof of the blackest smoke. The sufferings of those engulfed in the open chasm may have been less than of those spared for some short time in the many hospitals open to receive the sufferers.

From that time the eruption acquired fresh vigour. A hollow, incessant rumbling, accompanied by a certain trembling of the ground, and becoming duller and more monotonous at Naples, and in the villages around Vesuvius, an earthquaking movement continued. The showers of lava flowing in so many different directions drove off the inhabitants of the little farms.

This eruption is not considered to be the greatest from the volcano, but the severest in the memory of man.

By the evening of the 26th, the mountain presented the form of a funeral car,—the flame bursting out of the cone, forming the top, the tongues of flame at the base, the lamps around, while over the whole rested, like a baldachino, the dense white cloud,—the sea coloured red as far as Prosilipo. At dawn of the 27th it became less, the deafening roaring, the terrifying sounds, added to the fiery tongues that issued from the mountain, and the smoke and fog, had formed a dense white mantle that enveloped the mountain, touching the sky and sea with its edges. The height to which the stones were projected during the eruption was calculated at half a mile—the summit of the dense canopy of smoke a mile; while down the sides of the mount rose, at different points, the fires from the newly-opened craters, fourteen in number, each having its canopy of dense smoke. Amid all these horrors, the Observatory, with its brave professor Palmieri, remained untouched; but, standing, as it does, somewhat elevated, it was surrounded with the newly-flowing lava. Towards the night of the 27th, the horrors partly ceased; Vesuvius was hidden partly from sight; slight detonations were still heard, flames from the cone seen, but the dense mantle was not yet raised. The sight had lost its grandeur, but fear had not been dispelled. Three nights and days of terror had been passed by the inhabitants of the surrounding villages; fourteen batteries had been opened on the defenceless trenches of Torre del Greco, San Sebastiano, Ponticelli, Torre Annunziata, Castellamare, Naples, fulminating the fiery lava at them, and threatening to reach them with certain destruction.

The villages that certainly have been struck with the volcanic scourge are San Sebastiano, with its 1,982 inhabitants, and Massa di Somma, with 1,736. These have not been entirely destroyed,—about five or six houses still stand in the former, and the campanile of the church, though much shaken, still stands. In Massa di Somma all the buildings are not destroyed. The lava that struck San Sebastiano was divided into two currents. Ponticelli and Pollina were the most severely menaced, Portici and San Giorgio came under the third stream of lava; Resina and Torre del Greco under the fourth; the other places near, the fifth and sixth. Before reaching these parellels the enemy was silenced. The emigration of the fugitives produced a scene

never to be forgotten. And how often have the people been driven by the volcano from these spots, and again returned to take up their abode on the very site of their destroyed habitations, with a dogged, perverse courage of perseverance

From the king and his ministers to the national guard, the noble to the peasant, all offered succour to the houseless.

The number of victims cannot as yet be correctly stated. Above 2,000 houseless are lodged in the hospitals and convents of the city.

With very few exceptions all those who were overtaken by the lava, have died from their wounds. Up to the time of writing, Vesuvius is hidden. No one can vouch for its tranquillity.

It may not be uninteresting to take a brief retrospect of the history of this volcano. Of its pristine eruptions few traces remain. In 63 A.D., Pompeii, Herculaneum, Stabia, were visited by a violent earthquake, which partly destroyed them. Ten years after these cities had been restored. The fatal volcanic explosion that destroyed these three gems of southern Italy occurred in 79. . Subsequently, in A.D. 203, 471, 512, 685, 983, 993, 1030, 1049, happened the eight great eruptions, threatening all the inhabited parts around, and ruining many villages, as in modern times. New cities rose on the ruins of the old as now. Torre del Greco has been destroyed eleven times, and eleven times has been rebuilt.

In 1631, after being silent for 130 years, Vesuvius broke out in flames, and overran with its lava five-sixths of the territory adjoining it. New towns arose on the lava. In 1794 an immense torrent of lava reached the sea. Another disastrous eruption happened in 1860. In all these latter disturbances Torre del Greco has suffered.

In referring to the description given by Pliny the younger of the eruption, during which his uncle Pliny the elder lost his life, the similarity of the attendant phenomena is very striking, and one might be reading an article from a journal of the 25th of last month; the "ashes mixed with water" and the suffocating atmosphere (the cause of Pliny's death) were the same in both. Naples, now as then, is black with fine ashes like soot.

The terrific visitation occupies all minds. The bustling, progressive city for the time has forgotten its plans of aggrandisement,—and it has many in view. A brisk lucrative trade is about being organised with Japan—principally for the introduction of silkworms from the latter. Japanese wares are to be brought in, in plenty. Manufactured silk is to be exported. A free trade is to be opened between the two countries. Of the progress of education in the South of Italy we will write another time. That a great movement has commenced is undoubted, but the trammels of old use and prejudices have to be removed before it can flow apace.

## IMPROVEMENTS FOR KENSINGTON.

Advancing with the times, this most important suburb is increasing in buildings and population, and sites and plots have risen in value fourfold within twenty years. The widened thoroughfare and new church add a stimulus to progress, and, as at the Bayswater side of the Park and Gardens, it bids fair to reach the outlying railway boundary of Shepherd's Bush. There is, however, a great default in the want of a transverse line of open road between these two most important western lines of road, the only one being the narrow crooked way leading from the church to Silver-street, Notting-hill.

On the 13th ult. allusion was made in the *Builder* to improvements in the line of Church-lane, the driftway whereof is in parts only 15 ft. in width; but on further consideration and inspection, a much more effective and direct, as well as a more level route, can be recommended to the ecclesiastical and municipal authorities, if upon due consideration arrangements can be made for concession to the public of a material casement, that would requite all parties, and tend to the prosperity and embellishment of the town.

On looking up Church-lane from the High-street it is direct, save that the churchyard curves out upon the roadway some 20 ft., and at a distance of about 280 yards, the vicarage crosses the line at a right angle, facing down to the church. From this point the street runs westward, at an angle of 35 or 40 degrees, curveting again to the line of Silver-street. Now, to avoid this turn, and to save the demolition of eight or ten forecourts, shops, and houses, there is but one course, and that is to take a new line which would lead straight to the end of Palace Garden-terrace, at the site of the iron church; but to accomplish this the old vicarage must be removed. The intervening space is church land, the glebe extending to five acres, meadows, garden, and site of vicarage and offices, together with the iron church included. A road in this direction, through Palace Garden-terrace and the Mall, would make a straight line to Notting-hill; and the glebe grounds sloping southwards, and looking towards Kensington-gardens, and close to Kensington Palace-gardens, would offer an invaluable site for houses of a superior class; besides that ample space could be reserved for a new and commodious vicarage, with offices and grounds.

A new road through the vicarage garden would be in length barely 130 yards, and along either side might be erected terraces, which would amply compensate for the expropriation of about one acre of land. On the east side, again, there is a frontage of 150 yards facing the Palace Garden-road, the Palace and Kensington Gardens, the choicest site in the Royal precincts for first-rate mansions. These would produce a large income, and leave enough to spare for a better vicarage, offices, and garden, in a vastly better position than the present antiquated house.

On the Bayswater line, the finest ranges of houses are built on church lands, and there is no reason wherefore church lands in Kensington should not yield their full increased value, more especially when a great and pressing public requirement calls aloud for a line of intercourse from which a large community is debarred.

As there is great solicitude amongst the inhabitants and local authorities about the widening of Church-street, and it is under arrangement to give out a portion of the Churchyard to the main thoroughfare, the present is the moment for considering the aptitude of the new and direct line of thoroughfare recommended as above; which, in addition to the advantages it must confer on a large and growing business town, would also open out a better line of access to the improved neighbourhood of Campden-hill.

Thirty years back the vicarage glebe nestled amongst these groves; the thrush and philomel warbled their delights of blooming shrubs and meads bedecked in cowslips: now the scene is changed, for stately mansions, barracks, and rude brick walls surround it; therefore, although the palace-gardens and forest trees are still in view, it no longer possesses the amenities of a sylvan retreat; and so the vicarial incumbent, if suited with a better manse and offices, need not lament, in tender pastoral measure, "dulcia linquimus arva;" seeing that the exchange would make him the possessor of a better placed and more modern abode, together with the addition of another 500*l.* a-year to his stipend.

Quondam.

## PROPOSED CLOSING OF RED LION STREET.

Within the last few days the Clerkenwell vestry have been thrown into a state of considerable trepidation, on suddenly discovering that the Metropolitan Board of Works, in their Bill now before Parliament, propose to close up one end of Red Lion-street, their reason being that the level of the proposed new thoroughfare will be much lower than the gradient of Red Lion-street, and that for this new street a fine frontage is required. It appears that the clerk to the Clerkenwell vestry admits that, although the plans of the proposed street improvements had lain in the vestry since the month of November last, he never observed that it was proposed to close up the one end of Red Lion-street until within the last few days. The discovery places the vestry in a peculiar position, for they have already petitioned in favour of the Improvement Bill; but notwithstanding such petition they have now resolved to oppose the Bill, alleging that the closing of the street would materially reduce the value of property in the neighbourhood, and cause great inconvenience to the public. They further urge that Red Lion-street is the main communication between James-street and John-street, and that if they were to be blocked up in the manner proposed it would be most disastrous to the traffic of Clerkenwell. So important a thoroughfare ought not to be closed. The vestry have agreed to memorialise the Board of Works on the subject, and also to appear before the committee of the House of Commons against this portion of the Bill.

## THE STORY OF A COMPETITION.

An architect sits in his office alone:
'Tis night; work is over, the drawings are done:—
Ground plan, elevations, and sections are there,
Ink'd in, neatly tinted, and figured with care;
And a block plan completed with infinite pains,—
Crimson lake for the levels, and indigo drains;
And a charming perspective, to show the good people
How the building will look when they've finish'd the steeple—
That is, if the public don't strongly object
To pull down half a street to produce the effect:—
In the foreground,—to add to the charm of the scene,—
Are—a curate, a dog, and a lady in green.
In short, the best judges would soon be agreed
They're a very superb set of drawings indeed.
He scans them with pride—not unmix'd with dismay,
At the time and the money they've fritter'd away,—
For, in truth, he had something far better to do,
His clients were waiting and clamorous too;
But a church-competition demanded his skill,
So he left all the rest of his work to stand still.
'Twas the old tale,—nine architects handsomely ask'd
To allow all their pockets and brains to be task'd,
That a "local committee" might meet and select
One design, and the rest unrequited reject.
So he couldn't but feel, as he counted the cost,
Odds were heavy his money and labour were lost;
But it's done, and too late to indulge now in sorrow,
For the plans must be sent in by midday to-morrow,
And then for a month or six weeks he must wait,
Till they write (most politely) to tell him his fate.

The day has arrived, the committee have met
To look at the plans and decide on a set
Which their wisdom united pronounces the best,
And without more ado to return all the rest.
You'll imagine perhaps that of those who take part
In the judgment some few have a knowledge of art.
No such thing; but the best for their portraits shall sit;
You will see if for such a selection they're fit.

First, the vicar; a good man, but young—fresh from college—
With plenty of zeal, but a small stock of knowledge.
Next to him comes the senior churchwarden, a grocer:
He advocates "comfort without any show, sir!"
Then a butcher, who having new-fronted his stall,
Goes hard in for what he calls "taste," first of all.
Next a chemist—who gravely expresses a hope
That "whatever they do they'll steer clear of the pope.
He's been told"—here the vicar turns red- and "feels sure,
That remarks such as this will be deem'd prematu
"Hear, hear!" and a cough from our frien
Boodle,
Who, though we all know he's a terrible noodle,
Contrives on all sorts of committees to sit,
But ne'er speaks—so that doesn't matter a bit.
Then—a rich undertaker—whose dictum has weig
(His knowledge of churches they say *must* be grea
A former churchwarden—as deaf as a post,—
He's ne'er miss'd a meeting, and that is his boast;
When a point's raised and settled, discuss'd the and through,
He starts it soon after as something quite new
Last, the doctor; he has a young nephew
Of discernment say, one day will emula
"A pupil of Scott, sir! a clever yo
We really should ask him to giv
So the nephew comes in, and he tu
If his uncle can't manage to square the
He works at his drawings, and, under advice,
Takes "Nil" for his motto—it's modest and ni
For the plans (if it answer'd 'twould really be f
Are anonymous, mark'd with a motto or sign,
And the names, each in separate envelopes seal'd
Till the final decision, remain unreveal'd.

Well! it's clear that with such a committee of t
To spend time in looking at plans would be wa
So the doctor gets up, and with much tact and
Moves at once they select the design mark
"Nil."
He points out its merits, pooh-poohs all the rest
And really persuades them that "Nil's" is the
The good vicar winces, yet feels he's but one,
And against odds like this there is nought to be
So he too gives in with the best grace he can,
And they end by all voting for "Nil" to a man.

Now, whether the embryo rival of Wren
Carried out his first plan—and if so how, and when,—
Or whether they found when they wish'd to proceed,
The cost twice as high as the figure agreed,
And so let him make them a second design,
Just about half the size and not nearly so fine;
Or whether they gave up the church altogether,
And return'd the subscriptions collected,—or whether
The gentleman's living, or dying, or dead,
This history tells not,—but if what's been said
Shows the exquisite folly of young men competing
In cases like this with the notion of meeting
Fair play, or of coming out first from the ruck,
Except by some dodging, or else by good luck:
If it make one committee-man modestly own
That he can't by the mere light of nature alone
Know what architects (less gifted men, it appears)
Only learn by the study and practice of years;
If, in short, it shows reason why sometimes we may
Object to competing in this kind of way,
Then the point of this commonplace story is plain,
Nor has it been told altogether in vain.

**Engineering: Glasgow University.**—Mr. Elder, of Claremont-terrace, has set aside a sum of 5,000*l.* as a supplemental endowment in connexion with the Chair of Civil Engineering here in memory of her husband, Mr. John Elder, the well-known engineer.

## THE MEYRICK COLLECTION OF ARMOUR.

THIS fine collection of armour, together with a number of valuable ivories and some invaluable miniatures, as exhibited at South Kensington, was offered to the Government for 50,000*l.*, and might have been had, we believe, for 45,000*l.* Unwisely, however, the offer was not accepted, and the opportunity of making the national collection of arms and armour a really fine one at comparatively small cost has been lost. If an ordinary observer were to visit the Meyrick collection in the Grosvenor-street Gallery, where it now stands, he would suppose that he saw there all that he had before seen at South Kensington, and would surely be surprised to hear that the owner had received no less a sum than 30,000*l.* for a portion of it, which is hardly missed. If we understand rightly, the specimens have been bought chiefly for French collectors. Our Government is not well advised in such matters as this.

## THREATENED DESTRUCTION AT TENBY.

THE remains of the fortifications at Tenby are an interesting feature, and should be carefully [illegible]ved by the inhabitants of the town, if for [illegible]gher reason than desire to maintain its at[illegible]iveness. Nevertheless, the best part of these, [illegible]ly the fine arched gateway, is threatened with immediate destruction, on the ground that it obstructs the traffic. We beg the town council to look carefully into the matter, and to think well over it before they take this step. These tangible records of the town's history, landmarks of history, should not be carelessly dealt with.

## PARIS.

THE Theatre of the Porte-St.-Martin is to be rebuilt on an enlarged scale and as a model theatre. The question of compensation for damage done during the riots has caused delay, but the drawings are now all ready, and if nothing unforeseen occur, the new theatre will be ready, it is said, by the 1st of November.

The amount of building going on in Paris is extraordinary. A correspondent now there writes,—Great as my amazement was to see the terrible destruction of this beautiful city wrought by the Communists, it has been exceeded by astonishment at the rapidity with which the Parisians have rebuilt long rows of tall, handsome houses, to fill up the cruel gaps. The erections going on everywhere are marvellous. This does not, however, apply to the public buildings. They still remain masses of ruin, and such strange ruins too,—much more as if thrown down by an earthquake than burnt; but this, of course, is accounted for by the fact of petroleum being used, which caused explosions rather than fire. In only small patches is there any mark of smoke or burning.

## THE STRASBURG CHURCH COMPETITION.

T[illegible]rst three premiums offered for the best design for the Temple-Neuf in Strasburg have been carried off by the pupils of one architect, M. Qudstel, of Paris, viz.:—First premium, Messrs. Bernard, Motte, & Tournade; second, M. Beau; and third, Messrs. Farge & Santier. The fourth was awarded to M. Salomon, architect, Strasburg; and the fifth to M. Rædorer, architect, Paris. The premiums offered were 2[illegible]0*l.*, 80*l.*, and 40*l.*, no promise being given that [illegible]ei her of the rewarded competitors would be employed to carry out his design.

## SCHOOL BOARDS.

*Hull.*—It was recently resolved that at a special meeting the Board should proceed to the election of a surveyor, at a salary of 200*l.* per annum, whose duties should be to survey and measure school sites, prepare plans for the erection of schools, superintend the erection and fittings of schools, &c.

*Huddersfield.*—At the usual fortnightly meeting of the members of the Huddersfield School Board, the minutes of a special meeting of the Board, held on the 27th of April, with a view of selecting designs for School Board schools, were read. The minutes stated that it was resolved "that, as none of the plans approved by the Board in committee can, as the Board are advised, be executed for a sum of about 2,500*l.*, the Board feel that they cannot proceed to allot either of the prizes offered; but that the Board selected 'Lucidus Ordo' as an architect for one of the schools proposed to be erected." It was also resolved that the Finance Committee take the whole matter into their consideration, and communicate with "Lucidus Ordo" (Mr. C. Fowler, Leeds), requesting him to furnish the Board with a new design for a school to accommodate 800 children; and that, after the design had been received, the committee be empowered to instruct some competent person to estimate the cost of the building on the new plan, and then report the whole matter to the Board. The minutes were confirmed.

## THE TRADES MOVEMENT.

*Birmingham.*—A conference of the master builders and operative bricklayers and stonemasons of Birmingham has taken place in the room of the Builders' Association. At the end of last year the plasterers, carpenters, and labourers gave notice for a reduction in the hours of labour and an increase in the rate of wages, which was referred to Mr. Rupert Kettle as arbitrator, who gave a decision in favour of the men. As the bricklayers and stonemasons did not give the necessary notice at the proper time, they were bound to adhere to the existing terms for the present year. The masters, however, offered to advance the wages of the men one halfpenny per hour, making 7¼d., and reduce the hours to 54 per week. The stonemasons accepted the offer made by the masters; and the bricklayers, finding it impossible to obtain the advance they required (7½d.), agreed to accept the terms offered by the masters, at the same time stating that they should give notice at the end of the year for a further advance.

*Leeds.*—It was anticipated last week that the bricklayers of Leeds would turn out, the dispute between them and the masters turning upon the question of a further increase in the rate of pay of ¼d. per hour, which the men demand and the masters refuse to give. Six months ago, when the rate of pay was 6½d. per hour, the operatives made a demand of 1d. advance, the employers conceded ½d., which was accepted by the men, they, however, giving notice at the same time that at the end of six months they would demand the other ½d. At the same time they submitted a code of rules. In view of the near approach of the expiry of the notice, and in order to endeavour to arrive at an amicable settlement, a conference was held between deputations of the masters and men, and the result of the interview was an arrangement with regard to the rules, but no settlement could be arrived at in regard to the further advance demanded. The masters offered to give ¼d., making the rate of payment 7¼d. per hour; but the men stating that they had no authority to accept less than the halfpenny, the conference terminated. A meeting of employers, which was well attended, has since been held, for the purpose of hearing the report of the deputation with regard to their interview with the men. After hearing this report, the meeting passed the following resolution unanimously:—"That the offer made by the deputation on behalf of the masters of 7¼d. per hour to the operative bricklayers be withdrawn." During the meeting a communication was received from the Brickmakers' Association, who were also holding a meeting at the Nag's Head, enclosing a resolution as follows:—"That the members of this association (brickmakers) pledge themselves not to supply any bricks to master builders or bricklayers who are not members of the Builders' Association during any dispute or strike that may arise between the master bricklayers and their men." Thereupon the meeting of master bricklayers resolved,—"That this meeting presents its best thanks to the Brickmakers' Association, and that a list of the members of this association be forwarded to the chairman of the Brickmakers' Association." Several gentlemen not before connected with the association attended the meeting and enrolled themselves as members, expressing their determination to stand by the association.

*York.*—Nearly three months ago the building trades of York struck for advance of wages and diminution of hours of labour, but after remaining out for several weeks, the masons and bricklayers went in at the concession offered by the masters. The carpenters, however, still remain out on strike, their demands being fifty-three hours per week, and 6¾d. per hour; while the employers offer fifty-three hours per week, and 6¾d. per hour. There appears to be little prospect of settlement; for, whilst the masters are advertising for hands from distant places, the men are taking the same course, and cautioning carpenters not to visit the city.

*Edinburgh.*—A meeting of the master builders of Edinburgh has been held for the purpose of considering the following circular, which had been received from the operative masons in the city:—"We are directed by the members of the Edinburgh and Leith Lodges of the United Operative Masons' Association of Scotland to inform you that, after much consideration, they have come to the conclusion that the following bye-laws should be introduced,—1st. Wages to be paid weekly, and on the job, before dropping time on pay-days. 2nd. That sufficient shed accommodation be provided for both hewers and builders in wet weather, and proper plates kept hot for heating tea and coffee at the meal hours. In the event of this circular not being returned, duly signed by you, before Friday, May 3rd, 1872, we will consider you not favourable to the foregoing proposed bye-laws.—By order, William Armstrong, chairman; Thomas Walker, secretary." Mr. James Steele, builder, occupied the chair; and after some discussion, it was agreed that the master builders should meet the demands of the operatives as embodied in their circular, "so far as they possibly could, and in the most liberal spirit, although they considered some of the demands unreasonable."

*Dumfries.*—The whole of the journeymen masons in Dumfries not previously on strike have now struck work. There were meetings of masters and men, in order to come to an agreement as to the matters in dispute, which are the employing of slaters to point walls and the nine-hours limit. In regard to the latter, the men wanted the alteration to commence on the 1st of May, without any advance of wages. The masters were willing to grant the change on the 1st of August, and give ½d. per hour advance. A deputation of the men waited on the masters' meeting, and intimated that they accepted these terms, provided the masters would agree henceforth not to employ slaters in pointing. The masters declined to comply with this demand, and the men resolved to strike, and to withdraw the proposal to accept the nine hours on the 1st of August.

## THE PRESERVATION OF NATIONAL MONUMENTS.

A PAPER on this subject was recently read by Mr. Robert Young, C.E., at a meeting of the Natural History and Philosophical Society, Belfast. In the course of it Mr. Young said,—

A nation's life may be said to be recorded in its monuments,—using the word in the widest sense, to include everything bearing the impress of man's hand and brain. The earthworks of our own island, which are variously known as duns, raths, lises, forts, or moats; the cromlechs, menhirs, and rude stone circles of the earliest times; the round towers, sculptured crosses, anchorite cells, and churches and castles, from the sixth to the fifteenth century, would all be included in this category as historical monuments. Without going the length of saying that the destruction of any one of the thousands of monuments thus referred to would be a serious national loss, it would be a perfectly correct statement as applied to the destruction of a number of the same class, as of the round towers, or the earliest churches, or stone-roofed cells, or, again, as applied to the case of a monument which is unique or very rare, as our Giant's Ring at Drumbo, or the great raths at Downpatrick and Moylena, near Antrim, both of which are intimately associated with early Irish records of the greatest interest.

To take an illustration from what has occurred in our own neighbourhood within the last generation. The destruction of Trummery Round Tower was a national loss, as from the drawings which represent its aspect some thirty years ago, it seems to have been of quite a peculiar type, the only other tower then resembling it being at Dungiven, county Derry; but this, sad to tell, has also been swept away: both might have been saved by care.

Not far from Trummery, but on the south side of the town of Moira, there stood, on the edge of the chalk cliff which here overhangs the Lagan, a very fine mound enclosed by several rings; in fact, it was the Moy-rath (Moira),

which gave its name to the district, and to the famous battle in which Comgall was slain. The levelling of this some years ago by the tenant of the lands in which it stood, did not possibly create much indignation in the neighbourhood; still it was an outrage, and a loss which will be felt more and more as education spreads, and a better taste prevails.

The modern school of farmers, and more especially those who have lately migrated from Scotland, with their desire for level ground for their sowing and reaping, are very much inclined to clear off all protuberances, whether prehistoric or recent, and grub up and cart away, or, what equally offends the archæologist, bury in a deeply-dug pit the standing-stone or cromlech that interrupts the even tenor of his patent plough. To men of this type there is no appeal except through their pockets; but, fortunately for modern antiquaries, it was very different with the old Irish farmer, who had both superstitions and sentiments, the one making him dread the vengeance of the "little folk," if he put a spade into the old rath, and the other causing him to respect the ruined chapel or wayside cross which was from childhood associated with his religious ideas.

Whilst these sentiments are rapidly losing their hold all over the country, it is much to be wished that more correct notions of the real value to the community of these remains should be implanted in their stead. Why should there not be brief notices of the principal antiquities of our country placed in the books of lessons for the National schools of the three kingdoms? And along with this could there not be some instruction in this subject given to the teachers both at the head training establishments and in the model schools, by a properly-qualified professor? If this were done (and there really seems no good reason why it should not be), a very few years would bring about a marked improvement in the feeling of the lower classes towards these objects.

## TURNER'S DRAWINGS.

THE extraordinary prices realised by Turner's drawings in the Gillott sale, on the 4th inst., compels me to remind you that you some years ago published a letter of mine warning the possessors of these wonderful works of the fugitive nature of some of the colouring materials used by Turner in his water-colour pictures. The astonishingly increased value set upon them by purchasers seems to render needful a repetition of my detailed statement, published in the *Builder* at a time when Turner's drawings could not be sold for as many hundreds as they now fetch thousands. The "Bamborough Castle," which on Saturday last fetched 3,150 guineas, Turner *made for me for* 100 *guineas*. As far as the subject is concerned ("Morning after a Storm") it was done from a very slight sketch of David Cox's, which I supplied to Turner. It was four years in hand; and Turner, when it was completed, said he had more than half-finished another from the same suggestion, which he had laid aside for the one he let me have. I suppose the unfinished was a very different thing, for he said I had better let him finish that also for me. Now, sir, with regard to the fading, my former letter to you on the subject will show that I had *one other of the drawings,—sold on Saturday* for 1,210 guineas,—I gave 60*l.* or 70*l.* for it,—hanging for perhaps a year in a frame too small for it, so that on taking it out of the frame, to clean the glass, or for some other purpose, the margin which had been under the rebate of the frame, protected from the effect of light, was very much stronger and more vivid in effect than the rest of the picture, which, by comparison, was seen to have greatly faded. My letter went on to say that I took the drawing up to London, for the purpose of showing it to Turner, and that on calling on him, without the drawing, I met, at his house, in Queen Anne-street, the gentleman from whom I had the drawing. When Turner "pooh-poohed" my report of the fading, I asked him and the vendor of the drawing if they would wait together for an hour, that they might see and judge. They very willingly did so, and on my throwing the drawing on the table, Turner said, "I will never make another water-colour drawing." I replied, "There is no need for that; but let me beg of you never more to use indigo. The drawing before us shows that it is not the *colour*, but the light and shade which have so miserably perished, and any one can see that the whole effect of light and dark is given by indigo." "Well," he replied, "what else can I use?" I said, "I suppose there is nothing which would so exactly suit your purpose *if it would stand*, but you must make shift with cobalt, which you use freely enough as *colour*, though not as shade." Then he reminded me that in the days of Girtin they had nothing they could use but indigo. "True," I replied, "and can you show me a single framed and glazed Girtin drawing, or Turner drawing of the Girtin period, that has not become feeble in the grey, and foxy in the warm parts, because of the fugitiveness of the indigo, and the permanency of the iron pigments?" Those who knew me at the time when I made the discovery of the fading of the drawing in question, know that I made no secret of it, but, on the contrary, spoke out at once to my numerous Turner collecting friends; but neither that nor my letter to the *Builder* in years gone by seems to have damped the ardour of those by whom these over-rich picture-collecting people are led captive at their will.

J. H. M.

## THE PROPOSED NEW BUILDINGS AT ST. LUKE'S WORKHOUSE.

THE guardians of the Holborn Union have just placed themselves in a somewhat questionable position by rescinding the resolution passed on the 20th of March, adopting the recommendation of the building committee to proceed forthwith with the administrative block of new buildings at the City-road workhouse, at an expense of 7,500*l.* It was urged by those in favour of the resolution being rescinded, that they were not in a financial position to proceed with the buildings, nor were they required, as there was a great decrease of pauperism in the union; but it was contended, on the other hand, that the Farringdon-road workhouse was in a state of decay, and they did not know how soon it might be condemned; and it was further alleged that, by the workhouses being amalgamated, there would be a saving of 1,669*l.* a year, and matters would be better managed. It was also shown that, as they were allowed to dispose of the Bath-street property on the clear understanding that they were to erect a new block at St. Luke's Workhouse; and, as the plans had been approved by the local Government Board; a refusal to erect the building now would be a breach of faith, and that they would find themselves in an awkward position with the Local Government Board. The clerk informed the guardians that, if they failed to erect the new buildings, the Local Government had power to employ men to do it for themselves; but notwithstanding this advice, the resolution that the building be proceeded with was rescinded.

## THE CONNEXION OF ART AND SCIENCE.

AT the Academy dinner on Saturday last Professor Tyndall said, happily; there is no reason why art and science should not dwell together in amity; for, though they are both suitors of the same mistress, Nature, they are so in a sense and fashion which preclude the thought of jealousy on either side. You love her for her beauty, we for her order and her truth; but I trust that neither of us is so narrow-hearted as to entirely exclude from himself the feelings which belong to the other. Indeed, each is necessary to the completion of the other. The dry light of the intellect, the warm glow of the emotions, the refined exaltation of the æsthetic faculty, are all part and parcel of human nature; and to be complete we must be capable of enjoying them all. Trust me that we, whose light on earth is for the most part that dry light to which I have referred, often seek, and sometimes have, "glimpses that make us less forlorn" of those aspects of nature which reveal themselves in all their fulness to the eyes of art. We need such glimpses as a compensation for much that the times have taken away from us. There are some of us, workers in science, who largely share the poet's yearning to "hear old Triton blow his wreathed horn," and who, nevertheless, in opposition to natural bias, have been compelled to give up, not only Triton, but many later forms of the power which for a time assumed his shape. Emptied of the hopes and pleasures flowing from such conceptions, we stand in more special need of all that nature has to offer in the way of grandeur and beauty, of all that history has to offer in the way of strength and inspiration, and of such interpretations by men of genius of nature, history, and contemporary life as at this moment adorn these walls. If I might employ, in a sense so qualified as to render me sincere in using it, a form of language familiar to you all, I would say that we interpret these works of genius, these achievements in which our best men embody their highest efforts, as the outcome of the cultivated, but at the same time inborn and unpurchaseable gift of God. For though the labourer be worthy of his hire, and though the leaders both in arts and science may now by good right make pleasant terms with the world, they reached the position which enables them to do this through periods of labour and resolute self-denial, during which their arts and their science were to them all in all; and reward was the necessary incident and not the motive power of their lives.

## SIR CHRISTOPHER WREN'S SISTER.

HAS it ever been accounted for why there is no mention in "Parentalia" of Anne, one of the sisters of Sir Christopher Wren? From an inscription at Stretham Church, in the Isle of Ely, it would appear that she is buried there. It runs thus: "Anna filia Christopheri Wren, dec. Windsor et Wolverhampton, uxor Henr. B[illegible]sell, LL.D., et mater Henr. Christopheri, q[illegible] sepultus; et Annæ adhuc superstitis, ex[illegible] quidem molis; sed gemmarum istæ magni [illegible] et virtutis; vitam egit aliis jucundissimam, sibi autem acerbam propter varios corporis dolores, quos admirabili patientiâ et æquanimitate perpessa, animam placidissimè Deo reddidit 27 die Feb. A.D'ni 1667, æt. suæ 33."

She was born, like her great brother, in Knoyle, in Wilts, of which place Sir Christopher's father was rector, and her name appears in the parish register (1634). She married a Dr. Henry Brounsell, Prebendary of Ely and Rector of Stretham, in the Isle of Ely, where he was buried in 1678. As may be seen from the inscription, she died in 1667.

Perhaps the reproduction of these simple facts of history at a time when the "completion" (?) of St. Paul's is attracting so much attention, may elicit some further notice concerning the family and the descendants of the great architect.

SUO MARTE.

## THE HARMONY OF NATURAL LAWS.

IT may be accepted as an axiom in art, with the few exceptions which substantiate the truth of natural laws, and the harmony and beauty of natural ornament, that what is beautiful in form is substantially correct in construction. A subtle sympathy seems to exist between the purpose for which a structure is designed and the materials of which it should be composed; at once the key-stone of its beauty and its strength. It is this which creates *in* the mind of a true artist a feeling of disgust for the stucco abominations of speculative builders, and causes, even to the uneducated eye, a disagreeable sensation of fear on looking at anything which is structurally incorrect, without, perhaps, being aware of the existence of the error. The form of the arch which gives to a building a [illegible] appearance of grace and lightness possesses the [illegible]patest properties of strength; it is true that the latter qualification might be possessed by a horizontal beam of iron; but it would be at the sacrifice of truth and beauty unless it outwardly declared the character of the material. The beauty of the details in Moresque architecture is destroyed by the apparent instability of the horseshoe arch, and it need scarcely be added that the principle of construction is incorrect.

The mathematical regularity of the parabolic curve is the basis upon which the strongest engineering works have been erected; and this curve, which is the beautiful outline of a conic section, is that which is traversed by the projectile, and followed with undeviating accuracy by the jet of water. In the modern use of iron it has enabled the engineer to calculate with the greatest precision, and without any waste of material or falsely-exerted power, the proportions of the gigantic structures which cross some of the widest rivers in the world; and it is, as it were, the *natural* rout by which the strain which is brought upon the structure is transmitted to its supports. Suspend a rope from any height and it falls into the beautiful and natural catenarian curve upon which the principals of a suspension bridge are formed. There is no falsehood, no weakness, no deception in these laws. The weakness is always in the workmanship of man.

cannot exist in the beauty and simplicity of their action, or in the unity and harmony of their power.

When several streams of water are collected and confined, it may be from many natural escapements, the engineer knows that he is dealing with a power like that of Frankenstein: that having created it he must properly employ its proclivities or it will retaliate through its own *natural laws* upon its creator. "Natural processes come to us," says Professor Tyndall, "in a mixed manner, and to the uninstructed mind are a mass of unintelligible confusion. Suppose half a dozen of the best musical performers to be placed in the same room, each playing his own instrument to perfection: though each individual instrument might be a well-spring of melody, still the mixture of all would produce a mere noise. Thus it is with the processes of nature. In nature, mechanical and molecular laws mingle and create apparent confusion. Their mixture constitutes what may be called the *noise* of natural laws, and it is the vocation of the man of science to resolve this noise into its components, and thus to detect the 'music' *in which the foundations of nature have been laid*."

We have only to refer to the study of astronomy to illustrate the harmony and regularity of nature's laws, the discoveries which rewarded the patient labours of Kepler and Tyco Brahe, and, in later years, those of the two Herschels. We may see, in the most simple works of nature, in her diversity of form, in her combinations of curve and colour, the music in which, as Professor Tyndall says, the foundations of nature are laid. In the strange analogy now known to exist between the waves of sound and the waves of light calling colour into existence, so that we may actually detect the artistic merit of a picture by that which, long before this singular similarity of the unison of the chromatic and harmonic scales was detected, we knew as the harmony of colour. In the proportions of a tree it will be found that the sectional area of the stem is equal to that of its limbs combined; and if the stem branches into three their total area is equal to that of the stem itself; and this extends to the smallest twig upon the topmost bough.

In the haste to become rich, in the consequent necessity of evading the labour and patience of research, these lessons are frequently forgotten, entanglements of falsehood and error are accumulated, and the promise is never realised, "Ye shall know the truth, and the truth shall make you free."

In contradistinction to this, the man of science is reminded that he is not working for himself alone, and, it may be, not exclusively for the age in which he lives, but that future generations may be saved the labour of a lifetime by his additions to science, and the health and moral advancement of a nation be increased; while the artist (and it is almost impossible, as it has been shown, to separate the man of science from the artist) will improve the surroundings of his fellows by his adaptation of Nature's works in forms of beauty, and, by the means of natural laws, increase the happiness and prosperity of man; for ugliness, it matters not in what it may exist, is not only unpleasant to behold, but it is morally depraving to the mind.

BYNG GIRAUD.

## TECHNICAL TERMS AND "STANDARD" DICTIONARIES.

WHENEVER the technical dictionary appears I think its compilers will not be a little indebted to the labours of the *Builder*, and I venture to say that they will commit no small oversight should they omit to consult its many volumes. I say this much because I feel my own indebtedness to its pages, extending over a number of years, represents a considerable amount of practical information obtained, and a cultivated love of study and research, which I would never have otherwise acquired.

This aside for the present. My object now is not to pour out a volume of unmitigated abuse on the heads of our technical teachers and dictionary emendators, but to try and lead to the correction of these correctors,—some of whom much need to stand corrected.

Before me as I write lies a new edition of a work entitled "The Standard Pronouncing Dictionary of the English Language." The title-page announces that it is based on the labours of Worcester, Richardson, Webster, Goodrich, Johnson, Walker, Craig, Ogilvie, Trench, and other eminent lexicographers. Here is a goodly host of authorities as auxiliaries to the editor's labour. He tells us, moreover, that there are many thousand words which modern literature, science, art, and fashion have called into existence, embraced in this new edition. Well, I will confine my remarks to one of those branches which may be included under the term of arts or handicrafts specially belonging to my province.

Now for a few technical specimens, which will call for further comment hereafter:—

"*Plane*, s.—In joinery, an instrument used in *smoothing* boards."—Wrong.

"*Plank*, s.—A broad piece of sawn timber." Not a correct definition.

"*Balk*, s.—A great beam, or rafter."—Wrong again.

"*Lintel*, s.—The head-piece of a door or window-frame, the part of the frame that lies on the side pieces."—Doubly wrong.

"*Rabbet*, s.—In carpentry a joint, a groove cut *longitudinally* in a piece of timber to receive the edge of a *plank*."—Wrong again, though in part right.

"*Jointer*, s.—A long plane used by joiners to *smooth* surfaces,—the largest *smoothing* plane used by carpenters and joiners."—Wrong again.

"*Batten*, s.—A piece of *board* or scantling of a *few* inches in breadth."—Not a correct definition.

"*Deal*, s.—A pine board or plank."—Not a clear or full meaning.

"*Board*, s.—A piece of timber sawed thin, of considerable length, and usually between 4 and 9 inches in breadth."—Not a clear explanation.

"*Rib*, s.—In ship-building a piece of timber for strengthening."—Incomplete and misleading. What about house building.

"*Riser*, s.—Among joiners the upright board of a stair."—See "Step."

"*Step*, s.—A stair, the *round* of a ladder."—Incomplete and misleading.

"*Pilaster*, s.—A square column usually set *within* a wall."—Wrong again.

"*Newel*, s.—In architecture the upright post about which are formed winding-stairs."—Clumsy definition; also, newels are used with stairs that do not wind.

"*Traverse*, s.—In architecture a gallery or loft of communication in any large building."—Means a great deal more both in architecture and joinery; and the above is not the usual meaning.

"*Ledgers*, s.—In architecture pieces of timber used to support the platform of scaffolding."—What else in stonework?

"*Strut*, s.—In architecture a piece of timber obliquely placed to support a rafter."—What about partitions, floors, &c.; and are struts always placed obliquely?

"*Standard*, s.—In carpentry an upright support."—Short, clear, and sweet, is it not? What about its many meanings in ecclesiastical architecture, chests, stanchions, the ends of oak benches and pews, massive candlesticks, &c.?

So much for the "Standard" dictionary.

I might multiply instances to a very great number, but I have refrained on the present occasion from producing all the bad examples. In those words I have selected some are entirely wrong, some more passable though incomplete, and more in that confused or vexatious position that is sometimes not inaptly termed "neither right nor wrong." When so many examples can be selected belonging to the domain of the architectural and building professions it is only reasonable to infer that the practical and professional men belonging to various other professions would find no difficulty in gleaning a number of wrong terms bearing upon their branches.

A dictionary, like an art, is not the growth of a day; it must grow with the language of a people, and be ever ready to interpret their wants. Dictionaries are things that are never made, though always in process of manufacture, and lexicographers are but compilers, collectors, and collators. It would be well, therefore, when technical terms in general use are about to be included in a "Standard" work, that the compilers of these dictionaries, and their publishers too, should consult a council of living, practical men, instead of merely referring to a collection of, in many cases, doubtful authorities. Had one experienced architect and one intelligent and practical artizan in the building trade been consulted when this "Standard" dictionary was compiling, its editor would not have fallen into some scores of errors connected with architecture, and terms used in the routine of building and the workshop.

It was my intention when I began these remarks to supply proper definitions in place of those given, but on second thought I do not see that I am justified in occupying space in the *Builder* in doing work that some lexicographers have already been paid for (not) doing.

Every schoolmaster now-a-days thinks he can write manuals *ad infinitum* on the whole circle of the sciences. In architecture, engineering, and the cognate branches, I at least know what has been attempted and the result. How very few of these works which have lately flooded the country are really useful to architects, engineers, or mechanics. A technical dictionary is, therefore, one of the wants of our time.

A CRAFTSMAN.

## A HINT TO THE CITY GUILDS.

RECENTLY, though not for the first time, we directed attention to the position of the City guilds or companies, pointed out some of their defects, and briefly mapped out a plan of action that the majority of them might pursue with credit to themselves in the cause of education and art. We have been glad to note that a few of them whose names are associated with the building profession, and one or two outside of it, have made a move. Since the appearance of our last notice, we have been at some trouble in investigating the administrative machinery of some of these City companies, originally formed for skilled trade purposes, and the result of our inquiries irresistibly leads to the conclusion that one and all of them must undergo a radical reform.

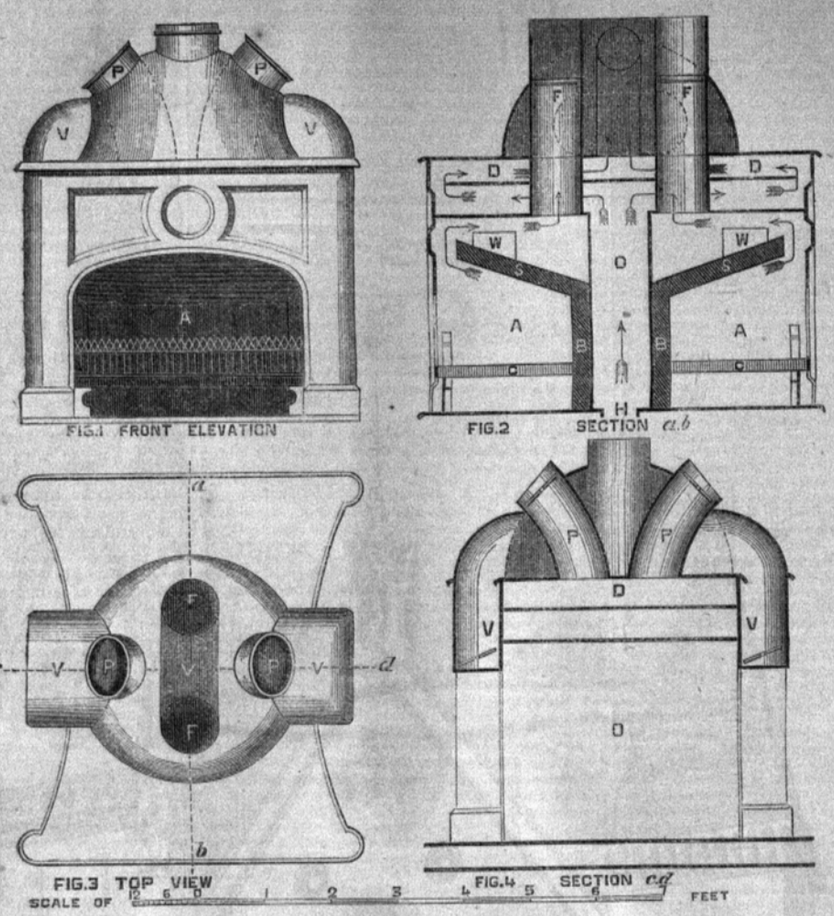
These guilds number very little short of a hundred, and their income and property otherwise represent some millions. Their courts are self-elected, and there is a family relationship among a great number of their members. The money which they hold and disburse has been left from age to age in their keeping, and was given originally for the purpose of charity, education, and apprenticeship, and it is only the simple truth to say that they are no more than trustees to these funds. A Parliamentary Commission seems indispensable, as well as unavoidable.

We find that some of these companies, which it is hardly necessary to name, are *de facto* trading companies, trading on the funds, and yet not amenable to the laws of trading companies; but there are other facts of a different complexion which will not bear the light or brunt of public criticism.

The companies are to a great extent "feeders" to the municipal council, and muncipal councils, we know, are now required by law to permit a proper audit of their accounts. To what extent have these minor corporations complied with these requirements, which are an absolute necessity in these suspicious and searching days, or on what ground can they claim an immunity from this fair and open ordeal? None that we know of. Large sums of money are voted away annually in these courts to fellow associates for merely taking a part in the honourable office of administrating charity funds. Then we have expensive dinners to crown these labours, votes of thanks and addresses emblazoned in gold, and portraits taken of men who have done little more than make a speech and feed upon charitable trusts. This is surely not right. Occasional dinners or refreshments, within decent limits, are good; but there is no excuse at present for the lavish expenditure and the unpractical action of some City Guilds.

In the internal clockwork and elective rule of these companies there are matters which form a grievance on the part of those humbly connected. Some of these companies compel men to be *free*, to take up their *livery*; and many of the poor freemen are complaining of being forced to pay what is known as *quarterage*. Resistance to these exactions brings results down on the heads of the offenders, which are unpleasant for them to bear.

Outside of all this internal economy the broad question before the public is, how long are the ancient handicraft guilds of London to remain in their present anomalous position? Will they move, and move at once, of their own accord, while they can do so with credit and safety, or will they procrastinate until a Minute of Council wakes them up to a sense of their insecurity, and a thunder-bolt immediately follows, in the form of a Commission? How often do the guilds require to be warned, and warned, too, by their friends, and not their enemies? We can see at a glance what they might and could do




A. Grate space.
B. Fire-brick lining.
C. Cast-iron base-plate.
S. Soap-stone plate.

O. Central air-chamber.
H. Communication with fresh-air box.
D. Deflecting plate.
F. Smoke flues.

P. Pipes for warm fresh air.
V. Exit-pipes for hot foul air.
W. Water-pan.

VENTILATING DOUBLE FIREPLACE FOR HOSPITALS.

and, as a beginning has been made by some, why do not the others hasten and follow the good suit? The cause of technical education, art, and trade, and its direct encouragement, are within their province, and the labour is easy. There is a large amount of landed estate in the hands of some of the City companies, both in this country and in the north of Ireland. In Londonderry, for instance, the Salters', and, we believe, other companies, hold estates which have formed more than once a subject of discussion as to their management.

We might point out what vast good these companies could effect for the agricultural interests, as well as the mechanical and manufacturing interests, of the British Empire, if an earnest resolve were made on their part. Changes must be made. Self-elected courts, composed of governing bodies numbering from ten to fifteen persons, and under, have often the entire control of immense sums, and are, from the nature of their composition, quite irresponsible. It is not to be expected that such a state of things can much longer last. Let the courts look to it themselves, and at once.

## VENTILATING DOUBLE FIREPLACE FOR PROVISIONAL HOSPITALS.

We have received from the Surgeon General's Office of the American War Department a Report on Barracks and Hospitals, also a Circular giving plans and specifications for Post Hospitals. These include some valuable information, and we may find an opportunity to return to them. Our present purpose is to illustrate a cheap ventilating fireplace which is described in the Circular. The instructions are that at all posts where continuous artificial heat is required for three months in the year the wards will be ceiled and have boxed openings carried from the centre of the ceiling to the ridge for summer ventilation. There will be two of these openings, each 10 ft. long by 2½ ft. wide, and 10 ft. apart. In winter the heating will be effected by a ventilating double fireplace, the form of which is shown in our engraving.

It consists essentially of two open fireplaces, placed back to back in the centre of the ward, and enclosing an air-chamber between them. This air-chamber opens above into the ward by two pipes, controlled by registers, and communicates below with an air-box, 18 in. square, which passes underneath the floor of the ward from side to side, and the ends of which open to the external air.

The pipe from this ventilating fireplace, 8 in. in diameter, passes up through a close-fitting earthen tube or collar in the ceiling. One foot above the ceiling it enters a shaft or jacket about 24 in. in diameter, which pierces the roof, and, extending 4 ft. above it, is covered with a sheet-iron cap, which in its turn is pierced by the stove-pipe, which will be capped in like manner. This shaft through which the stove-pipe passes should be of clay or earthenware, but if a wooden shaft be used a sheet-iron tube 18 in. in diameter, should intervene between the stove-pipe and the wooden tube. At each end of the ward, and 2 ft. from the centre, will be an opening in the ceiling 1 ft. square, from which an air-box will pass to a box enclosing the lower mouth of the tube surrounding the stove-pipe. The heat of the pipe above the ceiling will thus create a continuous upward current in the surrounding tube, which will be supplied by the vitiated air from the ward through the air-boxes.

## CONGREGATIONAL MEMORIAL HALL AND LIBRARY,

FARRINGDON-STREET, LOND

The first stone of the Memorial ll is to be laid this Friday, the 10th of May. e building will contain twenty-seven offices, ncluding board-rooms and committee-rooms to be used by the various societies in connexion wi h the denomination; a library (58 ft. by 45 ft.), with gallery, and a hall for meetings, &c. (87 t. by 45 ft.), which will also be used for ublic worship, and, with galleries, will accom odate about 1,500 persons; and a spacious hall an stair-case, with entrance lobbies from Farr ngdon-street. There are also a commodious e trance and staircase at the back from Fleet-lane. Provision is made for lavatories and oth r conveniences. There are also apartments or hall-keeper. The library, hall, staircase, and passages will be constructed on fire-pro f principles; and the whole of the basement will be vaulted with brick arches, forming ex ensive warerooms and cellarage, with entrances entirely separate from the other entrances to the pr mises. The outside of the walls above the plinth will be built with Devonshire limestone in drop ourses; the plinth in Aberdeen grey granite surm ounted by a bold moulding in red granite.

The jambs, mullions, and heads of the d ors and windows will be executed in Portland st ne, and the whole of the joiners' work in pitch p ne.

The architects are Messrs. John T rring & Son, of Basinghall-street, London.

The tender of Messrs. Jackson & Shaw, at something under 28,000*l.*, has been acce pted.*

* A list of the tenders will be found on another page.

CONGREGATIONAL MEMORIAL HALL, FARRINGDON-STREET, LONDON.—MESSRS. JOHN TARRING & SON, ARCHITECTS.

## ARCHÆOLOGICAL SOCIETIES.

*The Chester Archæological Society.*—A meeting of the members of the Chester Archæological and Historic Society has been held in the old Bishop's Palace, to hear a paper read by Mr. C. W. Duncan, on "Ancient English Land Tenures, with illustrations from the history of the County Palatine of Chester." The chair was occupied by Mr. Sheriff Gerrard. A vote of thanks was passed to Mr. Duncan for his paper, and to the sheriff for presiding, and also for presenting the society with a medical MS.

*Norfolk and Norwich Archæological Society.*—The annual meeting of the members of this society was held at the Guildhall. Sir F. G. M. Boileau, bart., occupied the chair. The secretary (the Rev. C. R. Manning) read the report. The treasurer (Mr. Fitch) read the cash account, from which it appeared that the year commenced with a balance in hand of 41*l.* 14*s.* 6*d.* Three coloured drawings of six of the figures upon the panels of a rood-screen at Fritton were exhibited by Mr. Fitch, who read a paper descriptive of them, written by the Rev. R. Hart. Another coloured drawing of two figures painted upon a panel of Barton Turf rood-screen was exhibited, and a paper by Mr. J. Gunn, describing one figure, that of St. Citha, was read by the Rev. C. R. Manning, in the absence of that gentleman. The Rev. A. G. Legge, vicar of North Elmham, exhibited a collection of pieces of pottery, stained glass, ornamental tiles, thimbles, a portion of a weapon, and other relics found upon the site of the old castle at North Elmham, built by Bishop Spencer, in the time of Richard II. Mr. T. G. Bayfield exhibited a portion of a rood-screen (which he had framed), and respecting which he read some remarks. Mr. Bayfield also showed other panels, which were also described. Mr. Fitch exhibited three original drawings, by Kirkpatrick, of brasses once in the Church of St. Clement, Norwich; some coloured drawings of figures on the rood-screen of the Church of St. John de Sepulchre; and the manuscript book of Mr. T. Tawell, founder of the Blind Hospital. Mr. Morant exhibited a tray of curious old keys, locks, a fibula, flint and bronze instruments, and other curiosities.

## WORCESTER DIOCESAN ARCHITECTURAL SOCIETY.

THE annual meeting of this society has been held in the Council-room of the Natural History Society. There were present—Mr. G. J. A. Walker, Vice-president (in the chair), the Revs. W. Thorn, T. G. Curtler, C. Boutell, H. Kingsford, T. J. King, and H. G. Pepys; Messrs. Hyla Holden, E. Lees, H. J. Vernon; J. Severn Walker and G. S. Munn (hon. secs.).

Mr. Severn Walker read the annual report, which says, in respect to the cathedral:—

"The most important work executed at the cathedral during the past year is the polychromatic decoration of the choir and sanctuary vaulting. On a buff or vellum ground extends scroll-work in more decided colours, interspersed with silver stars, medallions of angels and saints, on a blue ground, &c. Over the sanctuary our Lord is surrounded by rays of glory and groups of angels, SS. Peter, Paul, John, and James, being represented in the angles. The whole has a rich appearance, without being heavy enough to diminish the apparent height of the interior, which is often the effect of colour on ceilings when not judiciously applied. A satisfactory opinion of what will be the full effect of this decoration cannot, however, be formed so long as the choir remains in its present incomplete state, and the vaulting stands almost alone in being thus decorated. The stalls, with their interesting *misereres*, have been admirably restored, refixed, and provided with new carved oak desks and subsellæ, of excellent workmanship. The throne and the side screens are nearly completed, a rich marble and tile pavement is being prepared by Messrs. Poole, of London, and great progress has been made with the arrangements for lighting the cathedral with gas. The fine bells are now in perfect order, and the clock has been fixed and in admirable working condition for some time. The great hour-bell, when struck, is heard at a considerable distance, and is universally acknowledged to be a most acceptable boon to the inhabitants of the city and surrounding neighbourhood. Mr. Aldis, of Worcester, has taken a series of brilliant photographs of the miserere carvings, with the remarkable stone sculptures in the wall arcades of the eastern transept and the Lady Chapel, and heraldic panels and statuettes, from the Chantry Chapel of Prince Arthur, which he intends publishing by subscription in a 4to. volume, under the able editorship of the Rev. Charles Boutell, M.A."

The meeting unanimously adopted the report.

The president, vice-president, auditor, secretaries, and other officers were re-elected.

The Rev. W. J. Blew, M.A., was elected an honorary member of the society.

It was decided that the next excursion should be to Wenlock and Buildwas.

On the motion of the Rev. W. Thorn, seconded by Mr. Lees, thanks were accorded to Mr. Severn Walker for services rendered to the society.

## INFRINGEMENT OF A PATENT.

JUDGMENT has been delivered by the Lords Justices in the case of Murray *v.* Clayton, which came before their lordships by way of appeal from an order of Vice-Chancellor Bacon in Hilary Term. The bill prayed for an injunction to restrain the defendants from using or selling a brick-cutting machine which, the plaintiff contended, was substantially identical with a machine patented by himself. In the court below the bill was dismissed with costs, the Vice-Chancellor being of opinion that the plaintiff's claim to the novelty of his patent could not be sustained and that his specification was insufficient. His judgment was reversed by their lordships, who held that the plaintiff had established both the novelty and the utility of his patented invention, while the defendants had wholly failed to make out the case of alleged anticipation. The order of the Vice-Chancellor was therefore discharged and replaced by an order granting the injunction as prayed for by the plaintiff.

## INLAND SEA BATHING.

A BILL is now before the House of Commons for carrying out an idea suggested by me in the *Builder* for bringing water from Brighton by means of pipes. It will be as well to point out the necessity, in the event of a salt lake being introduced as a feature in this scheme, that it will be necessary that a supply of fresh water be also supplied to the lake equal to the quantity of water lost by evaporation, as, otherwise, the water evaporating and the salt remaining, the latter element will accumulate till the water acquires the specific gravity almost of quicksilver, besides rendering it anything but desirable or healthy for bathing.

W. SCARGILL.

## WORKING MEN AT THE INTERNATIONAL EXHIBITION.

SIR,—Will the authorities of South Kensington allow the working classes facilities for seeing this year's Exhibition? Will they understand that it is almost impossible workmen can visit it as they would wish with the same regulations as last year? It seems to be assumed that we only regard a visit there as a holiday recreation. This is a great mistake. We wish to pay a number of visits. We would like to inspect it thoroughly, but by the six o'clock closing we cannot do so. No sooner are we fairly there than (owing to the distance most of us live from it), it is nearly time to close. I found this the universal complaint last year.

The refreshments, too, why should they be on a scale suited only to the pockets of the middle and upper classes? Is this fair? Are we not entitled to better treatment? To put the matter very plain indeed, is it honest? Was not the surplus that originated these yearly Exhibitions contributed to by all, and should not all be considered in the arrangements? We are told of our ignorance, too, and want of taste. Is this the way to cure us?

ONLY A TAILOR.

## COMPETITIONS BEGINNING TO PAY AT LAST.

SIR,—If you have space in your columns, I think you really ought to notify to your readers the extremely liberal offer now open to them. Seeing the advertisement of the Scarborough School Board, who wish to obtain plans for their schools in the most approved manner, I wrote as requested for particulars, and was informed by letter from their clerk, that *on payment of 5s. in stamps*, they would forward a plan of the site. Since then they advise competitors not to proceed with the plans of one of the schools until the site is approved. Will the competitors be entitled to demand the return of the 5*s.*? It would be proper treatment of them, at all events.

"OLD STAGER."

## THE TURNERS' COMPETITION.

SIR,—In your impression of April 6th, there is a letter from Mr. Barber, upon "the prizes offered by the Turners' Company," and with your permission I desire to make a few remarks upon the subject.

Firstly, with respect to competitions of working men, I quite approve of them. If England intends to keep up her name for handicraft, she must do something of the sort, or in time we shall more or less fall into that carelessness which many mechanics know exists to a great extent in the manufacture of articles too numerous to mention. I coincide with Mr. Barber as regards the way in which the competition in turnery was carried out last year. Not knowing whether work was to be polished or not, I wrote to the secretary, and his answer was, "not polished;" so the articles I sent were unpolished, and the work which gained the prizes turned out to be polished wood and ivory! Now, most people know that work looks better when polished. Further, if the judges had made mention of second and third prizes, it would have been some encouragement to defeated competitors, and no doubt help them in their work or business; for I can assure you, Mr. Editor, that it is a great pull on the bank of a turner in the country to lose time in taking and bringing back his goods from London, and such were the conditions. Again, I took mine, and also the efforts of my son, and had I not done so, the articles might have been served as others were—never unpacked at all, which savours of injustice, I think. I respectfully observe, invite all the competitors of last year to send their work again polished, and when the judges are awarding the prizes for this year, let them say which is second and third, or award the tribute of honourable mention. There is another circumstance I would wish to mention—the labels of some of the competitors were changed. To say the least, that was a movement that must have led to confusion, if nothing else.

JAMES STARLING.

## LINE OF FRONT AND THE METROPLITAN BOARD.

*The Queen* v. *Vulliamy.*—The questions for the opinion of the Court of Queen's Bench, May 7th, in this case were whether the Thames Embankment, designated at the opening "The Victoria Embankment," was or was not to be considered, within the meaning of the Act, a "street;" and whether the superintending architect of the Metropolitan Board of Works had power to lay down a line which would have the effect of materially diminishing the space upon which it was intended to bnild the club-house.

A rule had been obtained, calling upon the superintending architect of the Metropolitan Board of Works to show cause why an order made by him on the 15th of December last should not be brought up by *certiorari*, with a view to its being quashed. It appeared that the masters of St. Stephen's Club had purchased of the Metropolitan District Railway Company the waste spot of ground at the corner of Bridge-street Westminster, and the Thames Embankment, whereon they proposed to erect a building for the purposes of the club. The Metropolitan Board of Works had laid down a general line of building on the spot, extending to the end of Mr. Horsman's house, at the end of Richmond-terrace, which abutted on the Embankment. Between that and Bridge-street there was only one other building, that of the Board of Control, and the question for the consideration of the Court was whether this was such a street or continuous line of buildings as gives the Metropolitan Board of Works power to instruct their superintending architect to lay down a line of building so as to insure uniformity. The superintending architect had laid down a line.

After viewing the site,—

The Lord Chief Justice said that he and his learned brothers had visited the spot, and they were of opinion that there was no pretence for saying that the ground in question was a street or place within the meaning of the Act that gives the Metropolitan Board of Works power to interfere. It was not a continuous line of buildings. Mr. Horsman's house considerably projected beyond the houses below it on the Embankment, and the Board of Control projected much farther. It must be an actual, and not an imaginary, line of buildings to bring the matter within the meaning of the Act. The rule would be made absolute to quash the order.

Order of the Board quashed accordingly.

## SOME RECENT EVIDENCE ON THE INFLUENCE OF SEWAGE FARMS ON PUBLIC HEALTH.

SIR,—The recent inquiry at Slough into the expediency of acquiring land for sewage irrigation purposes disclosed some extraordinary evidence as to the influence of sewage farms upon public health. It was then stated, that when sewage farms had been inspected at periods when no notice had been given of the intended visit, they had invariably "all been in an offensive condition, and at almost all of them the sewage was allowed to flow into the neighbouring water-courses." This assertion, with regard to Rugby, has already been contradicted in the columns of the *Times*; but, admit it to be true, it shows that sewage can be successfully purified after notice is given: therefore such evidence only tends to show that there may be periods of mismanagement on sewage farms, but that with proper management no such state of things, as before said, can occur. Fortunately, in the interests of the advancement of sanitary science and sanitary agriculture, we have the evidence of the Rivers Pollution Commissioners, who, for a considerable period, and at unknown times, took samples of the effluent water from the irrigation works of Croydon, situated at Beddington and Norwood. The analyses of these samples show incontrovertibly that, even with a moderate degree of attention, such works are successful in purifying sewage, and using up, for beneficial purposes, those matters so detrimental to health. With regard to the influence of these farms upon public health, the more closely this question is investigated, the more completely will it be found that instead of such works having a detrimental influence upon public health, the evidence collected tends in quite another direction. For example, at Norwood, which has its irrigation area of sixty acres within seventy yards of the nearest houses, and within 400 yards of the densely populated district of South Norwood, the works came into operation in the year 1866. The rate of mortality of the district of Norwood

for the six years previously to the use of the sewage farm was 18·71 per thousand; and for the six years subsequently to the execution of these works, the mortality has only been 13·25 per thousand. The irrigation works of Croydon proper, containing an area of 500 acres, are situated in the parish of Beddington, and in the hamlet of Wallington: the combined population of Beddington and Wallington at the last census was 2,845. At least one-fifth of the whole of this population reside within a quarter of a mile of the irrigation farm. I find, on looking over the register of the deaths of those districts, that between March, 1871, and the 1st of April of the present year, there have been in the districts of Beddington and Wallington only 26 deaths and 101 births, or the death-rate has been at the rate of 9·13 per thousand, and the birth-rate upwards of 35 per thousand. Of the 26 deaths there were but five in the immediate vicinity of the irrigation works, arising from the following causes;—one, disease of the lungs; one, disease of the brain; one, diarrhœa (an infant); one, anasarca; one, natural decay. In the whole year there has been no death from typhoid or typhus fever, and but two deaths from scarlet fever, and these occurred in a portion of the district lying a mile and a half to the south-west of the irrigation farm, and separated therefrom by the river. In the year 1870, after some extraordinary evidence given before Parliament, as to the noxious effects of the Beddington Sewage Farm on the health of the neighbourhood, I was called upon by the Croydon Local Board to inquire into the sanitary state of the inhabitants, and the sanitary condition of the district in the immediate neighbourhood of the irrigation works at Beddington. I then found there were no cases of illness that could be ascribed to the influence of sewage irrigation works upon the inhabitants residing in the immediate vicinity; on the contrary, it was shown that in many cases the inhabitants had, upon the advice of the medical practitioners, abandoned the wells in the immediate vicinity of their houses, on account of the pollution from the neighbouring cesspools, and had recourse for their water to the wells which lie in the natural drainage area between the irrigation works and the River Wandle, and that the use of this water had not been attended with any outbreak of disease; but, on the contrary, its substitution for water known to be polluted by cesspool matter in every case was followed by beneficial effects. At the time of making that inquiry I received considerable assistance from residents in the neighbourhood, who came forward to bear testimony to the innoxious character of the works upon public health. One gentleman wrote, "I have lived here ten years (living near the sewage grounds, with a large family), and have had no disease, neither has there been seated disease in the locality." Dr. Shorthouse wrote, upon the same occasion, "I have practised here for upwards of nineteen years, and I believe I have attended families in every one of the houses named in the schedule of your report. Upwards of two-thirds of the inhabitants of those houses are patients of mine now; that is, I attend when anything is the matter; and, with a solitary exception, in all my experience I have never seen a single case of disease which could have arisen from miasmata emitted by sewage. I have attended different members of the families inhabiting those houses for all sorts of diseases; but, with the exception to which I shall refer, I never saw a case which could be traced to malaria emitted from sewage. The exception occurred in a family named Hodges, who inhabited a house which I believe you have numbered 29 in your schedule (now occupied by Woodall), and the members of that family (both mother and children) several times suffered from remittent fever." An examination of that particular house in which they had remittent fever showed that they had two cesspools on the premises, one of which was within the dwelling-house. If further evidence were required as to the innoxious character of sewage-farms on health, it may be taken from the state of things in Croydon itself. The sewage-farm of Croydon is located to the west of the town, or in the locality in which the prevailing winds would carry any miasmata to the town, did they arise; yet Croydon, with its population of nearly 60,000 persons, has had a rate of mortality during the average of the past ten years of a little over 18 per 1,000, which is a low rate of mortality unapproachable in any other town of similar population. It may be taken as an established physiological fact that, in the rapid utilisation of the waste products which are cast off by the human species, as practised in sewage utilisation properly carried out, such works, instead of having a detrimental influence on health, can be shown to have quite a contrary effect. Indeed, it is now well known that air, water, or food, that has subserved the use of animals, and has thus ceased to promote animal life (having certainly become converted into matter destructive to its existence), has by this very process been made fit for the support of vegetable life. The vegetable kingdom utilises those waste elements which have been cast off by the animal kingdom, and after utilising them retains only those substances which the air or water had originally taken up from the animal, and in its turn again gives up the air, water, and food in a fit and healthful state for the use of man.

BALDWIN LATHAM, M.I.C.E.

## THE ALEXANDRA BREWERY, MANCHESTER.

AN addition to the Alexandra Brewery, in Erskine-street, Hulme, Manchester, belonging to Mr. James Cronshaw, has just been completed, and opportunity has been taken to add to the architectural appearance of the building, as well as to introduce many improved appliances. The brewhouse is in the form of a huge tower without floors, 46 ft. 9 in. square, and rising 120 ft. above the street. It contains two sets of vessels supported on beams, and the utensils of each set are placed one above the other. The process of brewing is commenced at the top, and is continued on the various stages as the liquor gravitates; thus pumping, which is supposed to injure the wort, is dispensed with. In each of three walls of the brewhouse are inserted two arched openings, filled in with windows and louvres. Each opening is 34 ft. high by 8 ft. 9 in. wide. The roof is surmounted by a louvred turret, which affords a ready exit for the steam arising from the liquor-pans, and has on each side a dormer containing a window or loading door. The chimney is built up from the south-west angle of the tower, and has an altitude of 126 ft. The cooler adjoins the tower, is 80 ft. by 40 ft., and has a gangway round. Two working-rooms will ultimately contain fourteen rounds of 120 barrels each; these vessels are considerably above the ordinary size. The floors are fireproof, and covered with the Val-de-Travers asphalte pavement. The whole of the basement story, 11 ft. high, under the working-rooms and yards, has a vaulted covering, and is occupied as a store. The boiler-house and stabling are detached, and built in the yard. The style adopted is of an early Lombardian Gothic type. Stock brick facing is used to two of the elevations, and common to the others, finished with black jointing, and relieved with blue Staffordshire and moulded red bricks and Colne stone dressings. The tower has a bold cornice, with trusses and string-course, of stone, an arcade of ornamental brick-work, and vitrified glazed green and red brick panels in the frieze. The chimney on plan is square, with canted angles, and has a capping of stone, with ornamental brick blocks under. The woodwork throughout is of red deal. Special attention has been given to facilities for thoroughly cleansing all vessels. The building has been designed and supervised by Mr. James Redford, architect, of Princess-street, Manchester. Mr. John Tomlinson, of Lucy-street, City-road, was the contractor.

## LETTING PROPERTY IN THE CITY.

A DISCUSSION of between two and three hours' duration took place in the City Council, the other day, respecting the letting of City property, in the course of which it was alleged by several members of the council that the City Lands Committee proposed to let certain property under its value. It appeared that the committee had recommended that a lease of No. 2, Falcon-square should be granted to Mr. Petrus Mondon for eighty years, from Christmas, 1873, at 110*l.* per annum, his present rent being 40*l.* per annum, and several members opposed the proposal, Mr. Deputy Fowler stating that the property ought to be 140*l.* a year, and that he knew of a responsible person who would take it at that price. It appeared that the property had not been advertised; but this was explained by a statement that the lease did not expire until December, 1873, and the committee supported their recommendation by stating that, along with the architect, they had viewed the property, and had come to the conclusion that when a good offer was made, of something like 300 per cent. more than they had already received, they had no right to keep the property in the market, and wait for two years, in the chance of getting an additional sum. Several amendments were proposed, with the view of defeating the proposal of the committee, and the prolonged discussion was animated and warm; but the recommendation of the committee was ultimately carried.

## MID-LONDON RAILWAY.

AFTER a contest not surpassed in costliness by one in a hundred of the private Bills that came before Parliament, the Mid-London Bills were settled in Mr. Hardcastle's committee on Group 1 of Railway Bills on Thursday afternoon. The committee declared the preamble of the main or eastern portion of the scheme not proved, but passed the western section, from Willesden to the Marble Arch. This is practically a rejection of the whole scheme, which has been presented to the committee with great power, care, and ability.

## BIRMINGHAM SEWERAGE SCHEME.

THIS important scheme, which has been under consideration by a committee of the House of Commons for nearly three weeks, has been passed by the committee, but with very important modifications of the scheme as presented in the Bill.

## FALL OF A BUILDING IN PRESTON.

ON Saturday morning last, the large malt-kilns and storehouse belonging to Mr. Brown, situate in Canal-street, Preston, fell with a heavy crash, without previous warning. Fifteen men were in the place at the time, but all except two, named Crook and Hunt, escaped, the latter being buried in the ruins. The body of Crook, who leaves a wife and six children, was recovered, but Hunt's was not found till afterwards. Three adjoining cottages were destroyed. The loss is estimated at from 10,000*l.* to 12,000*l.*

At the inquest, held on the 6th instant, Mr. James Tallis, contractor, said his men erected a great portion of the building, which he considered had been well erected. It was 50 ft. high, and was in two divisions. Tie-rods were extended across the rooms. He attributed the cause of the building falling to the giving way of two relieving arches, which were put in the foundations before the building was erected. The abutment of the arches, he thought, had gone down, and the pressure of the walls had been on the centre of the arches, and so caused the wall to bulge out. The foundations of the tower were entirely on brickwork. The ground itself was of a soft, marshy description. He did not attribute the giving way of the building to the quantity of malt in it. If the cause of the building falling had been ascertained an hour before the accident, the walls could have been relieved of over a hundred tons pressure. There were from three to four hundred tons of malt in the building. The ages of the deceased having been proved, the coroner summed up, and the jury returned a verdict of "Accidental death."

## ARCHITECTURAL ASSOCIATION.

THE general business meeting for the current session was held on Friday evening, the 3rd instant. It was decided to form classes at once for the study of geology, chemistry (experimental), and surveying and levelling with field-work, if a sufficient number of members give in their names before the 16th of May. The delegates to the Architectural Alliance for the past year attended, and reported that, in their opinion, it was advisable to maintain the Alliance, in any case, for the present, till it is seen how the Conference under the leading of the Royal Institute of British Architects succeeds in dealing with the questions to be brought before it. The Alliance, which first connected in some sort of bond the previously isolated provincial societies and the Architectural Association, having rendered the Conference of last year feasible, had, the delegates considered, done real service, though no one felt any wish needlessly to call much attention to it now or for the future. After some discussion, a vote of thanks was passed to

them for their services; and Messrs. J. D. Mathews, T. M. Rickman, T. R. Smith, and R. P. Spiers were re-elected for the ensuing year.

Mr. T. R. Smith, representative of the Association on the Committee of Selection at the International Exhibition, 1872, reported to the meeting; and complained of the few suitable drawings submitted. Out of twelve screens allotted only five had been used. He hoped that the exhibition of drawings, which is, in practice, more thoroughly under the control of the architectural profession than any other in London, and is held in well-appointed buildings, visited by large numbers of people, would be more enthusiastically supported in future years.

Other business, of no general interest, was transacted. The paper by Mr. G. Aitchison, on "Coloured Decoration," was postponed, at his request.

## ROMAN STATION, UTTOXETER.

SIR,—Will you allow me to add a few lines to the notice you have done me the honour of making in the *Builder* (see p. 334, *ante*) of the interesting discoveries I have made in this neighbourhood of Roman stations? The remarkable terraces mentioned are associated with the Roman occupation of Stramshall, and not the station at Madeley Holme. "Romano-British maze" should have been "Romano-British *ways*," connecting the station with other parts; a matter which I have yet to make out.

FRANCIS REDFERN.

P.S.—Working as I have to do at the trade of a dairy cooper, now much deteriorated, I have to follow up my researches under many disadvantages; but I hope they are not on that account any less valuable.

## CHURCH-BUILDING NEWS.

*Launceston.*—The quaint little church of St. Thomas has just been restored at a cost of 1,000*l.*, and will shortly be re-opened. The works have been carried out under the direction of Mr. J. Piers St. Aubyn.

*Debenham.*—An instalment of the work of restoring the parish church has just been completed, and the building re-opened for divine worship; but it is to be hoped that before long it will be found possible to complete the restoration. The whole cost of finishing, both internal and external, the restoration of the nave and aisles has been estimated at 600*l.* The present restoration has been confined to the interior of the nave and aisles, where the need for some step to be taken was most pressing, and the exterior of the church presents the same woe-begone and dilapidated appearance it has had for years. In place of the high pews, however, open oak benches now cover the area of the nave and aisles, the bench-ends being ornamented with carved poppy-heads and the panels with tracery, and by the alteration additional accommodation is afforded for 76 persons, notwithstanding the removal of the west gallery. This latter, too, has disclosed the semicircular-headed west arch. Most of the stones used in this arch are of a reddish tint, and others of the same kind are to be noticed in the piers of the nave. In the passages the pavement of irregularly worn pamments has been taken up and another substituted, which consists of red and yellow bricks laid on their edges in such a manner as to form squares, with small encaustic tiles at their corners. The church is now lighted with gas from jets arranged round the capitals of the piers of the nave. The re-flooring and re-seating have been carried out by Mr. R. Tooley, of Bury St. Edmund's, from plans by Messrs. Cory & Fergusson, of Carlisle; and the gas was laid on by Mr. A. Pank, of Norwich; the cost of the improvements being 750*l.*

*Saltash (Cornwall).*—The old church of St. Stephens-by-Saltash, built in the early part of the fourteenth century, has, after undergoing a thorough restoration, been re-opened for divine service. The work of restoration commenced in August last, and has been finished at a cost of 900*l.* for the body of the church, and 300*l.* for the chancel. The restoration, however, may be said to have commenced long before, the north aisle roof having been taken down in 1866, and replaced by a new roof, built by Mr. John Meager, Burraton, and the late Mr. John Billing, of Trehan, at a cost of 100*l.* The chancel has been attended to by the Ecclesiastical Commissioners. In the chancel there are new screens of oak, and tiles are laid down. The ceiling here is of oak. In the body of the church red and black tiles, from the Architectural Pottery Company, Poole, Dorset, are laid down. All the old high seats have been removed, and open pine benches, stained and varnished, are put in their stead. Many of the windows have been re-glazed, and a new one has been put in the eastern end of the south chancel aisle, this window having been specially subscribed for. The western gallery has been removed, and the main entrance has been made at the western door, which had been closed for a number of years. The font has been taken from the south aisle and placed in the tower, and a number of monumental slabs have been relaid in the east end of the north chancel aisle, and around the font underneath the tower. The belfry floor has been done away with and taken into the church, and another floor higher up has been erected for the ringers. The ceilings have been cleansed and whitened, and the bosses and woodwork painted. The granite pillars of the church have been redressed, as well as the granite work of the windows. The granite work has been obtained from the Cheesewring quarries. The church has been entirely re-floored. The tower requires re-dressing. The architect was Mr. Ewan Christian; and the builder Mr. Shaddock, of Saltash.

*King's Pyon.*—The little church at King's Pyon has been re-opened. The changes have materially altered the appearance of the interior. The leading feature in the alterations is the restoration of the north transept, in memory of the late vicar, the Rev. J. B. Peploe. A memorial window has been placed in the transept by Mrs. Peploe, in memory of her husband. It is a three-light window, and, in addition to tracery, with which the stained glass is enriched, armorial bearings occupy the centre pane. The old east window has been reset. The building has been reseated with open pitch-pine free sittings, and the floor is paved with encaustic tiles, supplied by Mr. Godwin, of Lugwardine. The old roof has been opened up, and the oak beams varnished. A warming apparatus has been provided. The pulpit, reading-desk, and altar-rails are all new, being formed of oak taken from Wells Cathedral when it was restored. They are covered with floral carving, executed by Mr. Halliday. The eastern memorial window at the end of the chancel, over the altar, represents the Nativity of Christ, the Crucifixion, and the Ascension. This, together with the window in the north transept, is from the establishment of Mr. Evans (late Chance, Bros.), Smethwick. The cost of the restoration is calculated at about 1,200*l.* The architect who has professionally superintended the restoration gratuitously, is Mr. Ward, of Stafford.

*Earl's Court, Kensington.*—The new nave and aisles of St. Matthias Church (the ground of which had been consecrated on the completion of the chancel) were opened for divine worship on the 11th of April. The nave has an open-timbered roof, of large span, being 40 ft. 3 in. from centre to centre, of clearstory walls. The building has been erected over a temporary iron church: the services were carried on as usual, the iron church not being interfered with till the permanent building was completed. The vicar is the Rev. S. C. Haines. The stained-glass window at the west end was presented by Mr. C. B. Trollope. The bells were given by Mr. P. F. Rose. Mr. J. H. Hakewill was the architect; and Messrs. Robt. Aviss, & Co., of Baltic Wharf, Putney, were the builders.

*Botus Fleming, Cornwall.*—The restoration of the parish church (now in a very dilapidated and dangerous state) is about to be commenced at once, from plans supplied by Mr. H. Elliott, of Plymouth. Mr. P. Blowey, of Buckland Monachorum, has been engaged to carry out the work. The tenders will be found in another page.

## DISSENTING CHURCH-BUILDING NEWS.

*Middleton-in-Teesdale.*—The foundation-stone of a new Primitive Methodist chapel has been laid at Middleton-in-Teesdale. Its style will be Italian, and the dimensions 56 ft. by 44 ft. The greater part of the building will be of rubble stone, faced with smoothed freestone. At the front there will be three entrances. After passing through the porch on the ground floor will be found two aisles, and a gallery round the whole of the building, supported on metal pillars with ornamental capitals, and faced with castings of an ancient shield pattern. The whole of the woodwork, including the rostrum, will be of the best pitch pine. The roof will be high-pitched, and the ceiling will consist of sixteen panels with corner pieces, the four ventilators also being ornamented. A recess will also be provided for an organ. The total estimated cost is 1,450*l.*, and accommodation will be provided for 600 persons. The architect is Mr. Race, Westgate. Contractors:—Masons' work, Mr. R. Walton, Middleton-in-Teesdale; joiners' work, Mr. G. Race, Westgate; plumbers' work, Mr. Bell, Middleton-in-Teesdale; slaters' work, Mr. Wanless, Darlington; plastering, Mr. Ormerod, Darlington.

*Back-o'-the-Bank, near Bolton.*—The memorial stone of a new Wesleyan Methodist school-chapel has been laid. The buildings, which will be one story high, comprise a schoolroom, 40 ft. by 30 ft.; a large class-room, 20 ft. by 13 ft. 6 in.; and two other small class-rooms, each 12 ft. by 9 ft. Under one of the small class-rooms a cellar will be formed, accessible from the back-yard, and fitted up eventually with apparatus for heating the large room and infants' class-room, and also with hot-water boiler for cleaning purposes, tea-meetings, &c. According to the ground plan, the rooms are arranged so that each will be accessible without necessarily opening or lighting the others. The schoolroom, which will also be used as a preaching-room, is placed parallel with Latham-street, occupying the entire length of the plot available, and is lighted by four windows to the Latham-street side, three windows in the gable end, fronting Draycott-street, and three small clearstory lights to the side wall above the roof of the class-rooms adjoining. This room will be 14 ft. high to the square, and 16 ft. high to the ceiling. Behind the schoolroom and adjoining Draycott-street is placed the large class-room for infants (also suitable for teachers' meetings, &c.), 12 ft. high, lighted by four windows, and separated from the schoolroom by a passage, 6 ft. wide, forming the principal entrance, with vestibule having folding-doors. Beyond this are placed the other two small class-rooms, 10 ft. high, and each lighted by two sash windows. The remaining space between the class-rooms and Back-street and adjoining houses, is devoted to boys' and girls' yards and conveniences, each yard being accessible by a separate passage from the schoolroom, 3 ft. wide. Externally, the general design of the buildings is an adaptation of the Italian and Gothic styles of architecture, but of a plain and unpretending character, being necessarily devoid of much ornament. The estimated cost of the works already contracted for is about 560*l.*, exclusive of lighting and heating, and other matters left in abeyance, which it is estimated will increase the cost to 650*l.*, towards which 570*l.* are promised or subscribed. The architect is Mr. Thomas Ormrod, of Bolton, and the contractor for all the works, Mr. William Townson, of Bolton.

*Melbourne.*—The new Congregational Church here has been opened for divine worship. The new building was designed by Mr. G. H. Sheffield, of Derby, architect. It is in the Early English style, approaching to the Transition. It has a tower and spire 55 ft. high. The body of the church is 58 ft. in length, and 34 ft. in width, with transepts and apsidal chancel. The accommodation is for about 300 sittings. In the front gable is a large rose window, 8 ft. diameter. The whole of the external walls are of stone, and the interior plastered, with strings of mosaic tiles. The roof and interior woodwork are of pitch pine, varnished. Messrs. Bullock & Barton, of Melbourne were the contractors. The whole cost will be about 1,200*l.*

*Grimsby.* — The Wesleyan Methodists of Grimsby have determined to erect a new chapel adjoining their present school in Duncombe-street to seat 1,000 persons. The entire proposed cost of the new erection is to be 2,000*l.*, three-fourths of which are to be raised by the time the building is complete. Several subscriptions have been already promised, and there is every probability that the money will be raised.

**Westminster Abbey.**—We learn that in the excavations consequent upon the rebuilding of the Receiver's house at Westminster, the bases of the pillars and a part of the encaustic tile floor, as well as some other remains, of the ancient chapel of St. Catherine have been brought to light. Previously a large number of the capitals of the pillars of the ancient Norman cloisters, some of them covered with figure subjects, were turned up.

VARIORUM.

The current number of the *Art Journal*, speaking of Art Teaching in Rome, says,—"The Eternal City has always been a passive rather than an active inspirer and teacher of the fine arts. It is the stately ruins, the art-treasures, the beauty of position and climate, rather than its elementary schools or professors, which make it of inestimable value to the artist. Let a young man come here, well trained in England or elsewhere, and then make use of his own eyes rather than of oral instruction, and he will never regret the labour nor the expense; otherwise, unless he possess rare ability, the direct loss will be great. It might be different were there at this time any prominent painter or sculptor to give a decided tone to art; but since the death of Canova, Thorwaldsen, and Gibson, there has been no one of sufficient merit to act as a leader, though we have had, and still have, many artists of great merit. Each coterie has its favourite sculptor or painter, around whom it considers that the art life of Rome will centre, but these do not affect the world at large. Again, the standard of art is much higher in England than here. We may cite the case of a youth who was sent at great outlay by his friends to be educated as an artist in Rome. He received three medals and considerable credit at the Academy of St. Luke, but on returning to London proved incompetent for the primary class of the Royal Academy. The French, nevertheless, show their wisdom and generosity in the important school which they established many years since for their countrymen in the spacious and stately Villa Medici, and which they still maintain, in spite of rumours as to its being converted into the French Embassy, and of the fact of the Italian Government having offered to purchase it for ministerial purposes."——"Hammond's Wages Calculator for Nine Hours per Day," is neatly printed on stout card, and varnished to hang up in warehouse or counting-house. It will be found useful in large factories.——"The Twelfth Annual Report of the Amalgamated Society of Carpenters and Joiners, from December, 1870, to December, 1871. John D. Prior, General Secretary. Manchester: North of England Co-operative Printing Society. 1872." In speaking of the results of recent misunderstandings, this report says:—

"The newly-elected Executive Council felt it to be their first and most important duty to give practical effect to the clearly-expressed will of the members, and although they have been reluctantly compelled to expel several refractory branches, yet confidence and harmony have been restored throughout the Society. Our provincial branches, with but trifling exceptions, remain loyal; our Irish, Scotch, and American branches have all proved true to the Society; and at the end of the year we have in London 48 branches, and 1,632 members. At the end of 1871 we have 414 less members than we had at the end of 1870, and the decrease in our funds during the year amounts to 739*l.* 11s. 3½d. We have paid during the past year to our unemployed members the sum of 6,436*l.*; in replacing stolen and burnt tools, 360*l.*; to our sick members, 5,595*l.*; four of our members who have become permanently disabled from following their employment as carpenters and joiners have each received the sum of 100*l.*; for the funerals of deceased members and their wives we have paid 1,105*l.*; to our aged and infirm members, 131*l.*; in maintaining the privileges of the trade, 1,120*l.*; and in benevolent grants to distressed members, 425*l.*

Our receipts during the year have amounted to 21,916*l.* 13s. 7¾d.; and at its close we held a balance in hand of 16,829*l.* 8s. 1¼d., or 1*l.* 14s. 5½d. per member. This is highly satisfactory, when we consider the very unfavourable circumstances under which we commenced the year, and leads us to anticipate a speedy and large increase in our accumulated capital, should the short time agitation become satisfactorily settled."

——"How to make Money by Patents. By C. Barlow. London: published by Barlow & Co., Patent-office." This pamphlet, although somewhat in the nature of a trade circular, gives useful hints and suggestions to inventors and patentees. This second edition has been enlarged and mostly re-written.——"The Journal of the Historical and Archæological Association of Ireland (late Kilkenny Archæological Society). Twenty-fourth session, 1872. Vol. II. Part I., fourth series. Dublin: printed at the University Press for the Association, 1872." The contents of this number (9 of fourth series) includes, besides an account of proceedings, an interesting paper "On Ancient Lake Legends of Ireland." It relates to the vision of "Cathair's druid, Bri Mac Baircheda,"—a poem foreboding the origin of Wexfordhaven; translated and edited by J. O'Beirne Crowe, A.B.; another paper is titled "The Approaches to Kilkenny in Olden Times;" and another, with an illustration, is on "The Whitby Monument in the ruined Church of Kilmore, County Wexford," by M. J. Whitty.——In the current number of the *Leisure Hour*, Mrs. Henry Mackarness commences, under the title of "The Children of Olden Time," to develop, "chiefly for young readers," a very capital idea. The portion already published says something about Saxon and Norman children, their dress, habits, toys, and so on, and is pleasantly illustrated from Strutt and other authorities.

## Miscellanea.

**The Building Societies Bill.**—On the 2nd inst. Mr. Bruce received a deputation of representatives of building societies and members of Parliament in the Lobby-room of the House of Commons on the Building Societies Bill. Mr. Higham, the representative of the London building societies, said there had recently been a conference of representatives of seventy-five building societies from all parts of the kingdom, the amount of whose investments exceeded 5,000,000*l.*, and they unanimously approved of the Building Societies Bill. There were probably 20,000,000*l.* invested by 50,000 persons; and what the deputation desired was that the Bill should be passed without any unnecessary delay, and thus settle the uneasiness now widespread throughout the country. Mr. Bruce said the best solution of the question would be this,—the Bill to be recommitted and their proposed amendments inserted, and then they might re-consider points as to which some difference of opinion existed. The opinion of the Government would have to be taken on the question of registration, whether it should be undertaken by the Government and connected with friendly societies. They would have the new Bill printed, and if they could dispense with a Select Committee they would do so.

**Artists' General Benevolent Institution.** The anniversary dinner in aid of this important charity will be held on Saturday, the 18th inst. Notwithstanding the prosperity of our popular artists, there are others out of sight, and almost out of mind, whose prosperity has been clouded by accident or disease, their efforts not attended with success, some of whom have died, leaving widows and orphans unprovided for. It is for the purpose of mitigating these sufferings, and so mitigating them that delicacy of feeling shall not be wounded, that this Institution was established. Relief is extended to distressed meritorious artists, whether subscribers to its funds or not, as well as to their widows and orphans, merit and distress alone constituting a claim; the names of persons thus relieved are not promulgated. We invite for it the assistance of our readers.

**They Will and they Won't.**—Large numbers of artizans have made a general strike against working overtime. Some workmen in Birmingham think differently. The labourers engaged in the construction of the postal telegraphs received, a short time ago, an order forbidding them to make overtime. In consequence of this privilege, as they considered it, being withdrawn, they asked that their wages should be raised from 20s. to 24s. per week, urging the fact that they had to go away from home to work. This request was not complied with, and on Monday they went to the head office in Birmingham and demanded the day's wages which was always kept in hand. The money was paid them and they left, and are now on strike.

**The New Record Room at Lewes.**—The foundation-stone will be laid this month. The contract has been taken by Mr. Berry, and the building, which will be from designs furnished by Mr. Card, architect, of this town, will cost about 430*l.* On the ground-floor space will still be reserved for a provision market, and the New Record Room will occupy the first floor. It is approached by an easy curved staircase, 11 ft. wide, and its dimensions are 30 ft. by 20 ft. and 16 ft. high. The ceiling to the collar beam is to be covered with match-boarding, laid diagonally on moulded timbers.

**The Holborn Statue of the Prince Consort.**—The design for a pedestal for this statue being considered unsatisfactory, Mr. Edmeston, in the Court of Common Council, proposed that it be referred back to the committee to obtain a more suitable design, to be considered with especial reference to the proportions of the statue, at a cost not exceeding 2,000*l.* This was carried; and it was further resolved, on the motion of Mr. Hammack, that the committee should forthwith advertise for designs, and that a premium of fifty guineas be given to the author of the selected design.

**Excursions round Oxford.**—The committee of the Oxford Architectural and Historical Society have arranged a fresh series of Saturday walks and excursions in Oxford and the neighbourhood, which promise to be interesting. On Saturday, May 4th, they went to the Roman villa at Northleigh, and the Churches of Northleigh and Handborough, also at Northleigh. They saw the interesting Roman remains, consisting of the foundation-walls of the buildings surrounding the large central court, the chambers for the hot and cold baths, and the beautiful tesselated pavement over the hypocaust. The Church of Northleigh is interesting as having one of the so-called Saxon towers. For May 18th, All Souls Chapel is selected, the restoration of which is in progress. The original carved stone reredos has lately been discovered here behind the wall-painting at the east end of the chapel. On May 25th, Wantage, the Icknield Way, and Letcombe Castle will be visited. Letcombe Castle is a remarkably fine British earthwork, the most extensive of any along the whole line of the Icknield Way. It comprises some twenty-six acres, and has its trench and vallum perfect. Uffington Church, the White Horse-hill, Uffington Castle, Hardwell Camp, and Wayland Smith's Cave are the objects named.

**New Bridge at Great Waltham.**—This new bridge, which has been long in course of construction, at Howe-street, Waltham, is now open for public traffic. It is built to replace an old wooden structure, the property of Trinity College. It is built with brick abutments and iron girders, and is 16 ft. wide and 35 ft. clear span. The roadway is formed with four cambered cast-iron girders, each about 40 ft. long, and filled in with brick arches turned in cement. Over all there is a covering of 6 in. of cement concrete and 4 in. of gravel. The fencing on each side is formed with moulded iron standards, having square wrought-iron bars fixed diagonally running through them. The approaches on each side have been heightened, and it is hoped that, even in the highest floods, the public will be able to pass over, not only dry-footed, but in safety. The work has been carried out by the Chelmsford Highway Board, from the designs and under the superintendence of Mr. Frank Whitmore, architect, Chelmsford; Messrs. Coleman & Morton being the contractors for ironwork, and Mr. George Last for builder's work.

**Gas v. Horses.**—"R. T." writes,—There are various reasons against steam-engines being used on public roads, yet there is a desire to overcome these objections. Let us see what can be done with the gas engines. Two and three horse-power engines are now common for manufacturing purposes. To start and stop, the gas has to be lighted and extinguished: a hand-tube, such as lamplighters use, would serve. Some of the advantages to be gained thereby would be,—no coal, fire, gushing steam, boiler, water, cinder dust, noise, nuisance, danger, weight, nor delay; and cleaner roads. Take a tram-way-car: a gasholder underneath would afford supply all day; the piston-rod could be fixed to the present iron wheels; the cost about a pair of horses, the keep less. So let us go ahead, and send horses to the dogs.

**The Carlisle Infirmary Extensions.**—Tenders have been sent in to Messrs. Cory & Ferguson, architects, for the new wards, and for the whole of the contemplated new buildings to be added to the west end of the Cumberland Infirmary. No contract has yet been entered into; but one or more of the tenders for the whole work is under 5,100*l.* The estimated cost of this portion was 5,200*l.* The *Carlisle Journal* states that it is contemplated to enter into a contract for this portion first, and to decide on a provisional contract for the dispensary block and buildings on the east side, to be carried out as the funds accrue.

**Theatre for Aberdeen.**—Steps are being taken to erect a new theatre and opera-house here, the want of which has been much felt. A company has been formed, and most of the shares have been taken up. Building operations are to commence at once, and it is to be ready by December 1st. It is expected to cost about 7,600*l.*, and the architect is Mr. Phipps, of London.

**A New Asylum.**—The Metropolitan Asylums Board have purchased nine acres of land in the Old Kent-road, as a site for an additional asylum, which is shortly to be erected, and the local Government Board have confirmed the purchase.

**The Wellington Monument for St. Paul's.** Some discussion has taken place on this subject in the House of Commons, in course of which the Chancellor of the Exchequer explained that the supplementary contract with Mr. Collmann on behalf of Mr. Stevens, the sculptor, was that the work should be finished in two years and a half, and it was undertaken on the part of the Government to authorise the payment of 250*l.* a month on the certificate of Mr. Fergusson and Captain Galton that the work was satisfactorily done. Ten of those payments had already been made. During the winter Mr. Stevens had been so ill as to be unable to do actual manual work, and consequently one portion of the work had been delayed, but he was informed that it was nevertheless in a satisfactory state of forwardness, and that it would be completed within the two years and a half. A third of the time had expired, and more than a third of the work to be done in that time was already done. He was informed that the work was most excellent and admirable, and a beautiful specimen of art, and it was because it was so beautiful and good a work that the Government did not wish to take it out of Mr. Stevens's hands. Whether the site was the best that could be found for the purpose or not, it was not for him to say; he thought the Government had done right in the steps they had taken to have the work completed.

**The Proposed Enlargement of Lincolnshire Lunatic Asylum.**—At a quarterly meeting of the visitors of the asylum, the report of the visitors was read, which stated that the Commissioners in Lunacy required a workshop to be built, and a hospital for the accommodation of sick lunatics during epidemics. The visitors had referred these requirements to a sub-committee, who found that the cost of adopting them would be 9,000*l.* The suggestions with regard to the enlargement of the building and the expenditure of another heavy sum of money, however, met with no encouragement. Sir M. Lopes therefore moved that no further steps be at present taken for the enlargement of the building. The chairman, who said he believed that neither of the Quarter Sessions benches would sanction the cost of an enlargement, took the sense of the meeting, and every hand was held up for the motion, which he declared carried, adding that something must be done to isolate patients suffering from epidemics.

**Progress of the Chelsea Embankment.**—The contractors for the Chelsea Embankment have already made considerable progress with the works. Several thousands of cubic feet of earthwork excavated to make way for the foundations of the Holborn Viaduct railway station, have already been made use of for the embankment, having been conveyed from the intended railway station site to Blackfriars, where it is emptied into barges and thence taken to Chelsea, where it serves to form the embankment now in course of construction. Next week an important sale of property required for the new embankment will take place. The property comprises the building materials of thirty houses, wharfs, stabling, and buildings in Duke-street and Lombard-street, Chelsea, at the corner of Paradise-street.

**Cost of Road-scraping.**—At Paddington Vestry, on Tuesday, Mr. Stephens, the surveyor, presented a report upon the different methods of road-scraping now in use in the parish. He states that the ordinary road-scraper costs 3s. 7d.; the hand-machine, 4*l.* 10s.; and the horse-machine, 15*l.*; while the expense of working is respectively 2s. 4d., 3s. 2d., and 8s. 6d., a day. The horse-machine will do an amount of work equal to that of sixteen men with the hand-scraper, and eight men with the hand-machine. In the winter months, after a fall of snow, or during a rapid thaw, the horse-machine will perform the work more speedily than by manual labour, and with greater success, provided it be used before the surface of the road become soft. The report was adopted.

**Gift to Openshaw of a Mechanics' Institute Building.**—Mrs. Mary Brundret, *née* Miss Whyatt, of Openshaw, has laid the foundation-stone of a Mechanics' Institute in the township, which she has generously consented to build and furnish at her sole expense. The building will have two stock-brick fronts, relieved by stone dressings. The internal arrangements will be of a complete description, and in the plan provision is made for reading, billiard, and class rooms, and library, with house for the persons in charge. The cost will be about 3,000*l.*

**The Scandinavian Sailors' Church, Rotherhithe.**—The inauguration of this building for worship (the foundation-stone of which was laid by Prince Oscar, last July) has taken place, in the presence of Baron Hochschild, Envoy of Sweden and Norway, the Dean to the Royal Danish Navy, the incumbent of the church, and several other gentlemen connected with Scandinavia and its interests. A novelty in connexion with the church (which will hold 350 persons) is a building of club-rooms for officers and men. The total cost, apart from the site (which was given by the directors of the Surrey Commercial Docks, who have in various other ways assisted the undertaking) amounts to about 2,500*l.* Mr. Biven is the architect. The design for this church is illustrated by a view in the *Builder* for 1870, p. 207.

**The "A B C" Sewage Process.**—A number of gentlemen, consisting of directors and shareholders of the Native Guano Company (A B C Process), and a few invited visitors, have visited Crossness, to inspect the works now going on there at the reservoir for the southern sewage of the metropolis, whence it is discharged into the river at a proper period of the tide. There were about 150 visitors altogether, and they were conducted over the works by Mr. Rawson, the general manager, who claims for the process a decided commercial success, and states that each ton of native guano leaves a clear profit of 2*l.*, at which rate the sewage of the metropolis alone would produce an annual income of 1,282,500*l.*! The chemist and engineer were present during the inspection, and readily gave information to the visitors on all points of interest.

**The Maypole at Otley.**—A new maypole has been erected at Otley at a cost of 34*l.* It is 71 ft. long, and 8 in. in diameter at the top, by 18 in. at the bottom. It is surmounted by a weathercock. The cost of its erection and of other proposed improvements around it, will be defrayed by public subscription. The last maypole at Otley was struck by lightning in June last, after standing more than thirty years, and the new one is provided with a lightning-conductor. A procession took place on the occasion, headed by the May Queen (a Miss Crofts), crowned and decked with flowers, and dressed in white; and the ancient circling dance round the maypole took place to a band of music in attendance. The dancers had a "serene morning" for their outing and their innocent "orgies."

**Engraving by Sand-Blast.**—The use of the sand-blast for engraving and ornamenting stone and glass is now fully recognised in the United States. The Franklin Institute have conferred a medal on the inventor; and they say of the process that glass ornamented thereby can only be compared with that etched by powerful acids, yet the entire absence of all undercutting renders it superior; and that some of the effects produced would be hard to imitate by any other known mechanical process, and yet the sand-blast produces them with an ease and precision truly remarkable, and worthy of the special attention of natural philosophers.

**Grimsby Bells.**—The bell for St. Andrew's Church, presented by the Bishop of the diocese, has arrived, and will shortly be placed in the tower of the church. Its weight is 4½ cwt.; its diameter, 26 in.; and it is from the foundry of Messrs. J. Warner & Sons, of Cripplegate. His Lordship has placed a prayer in Latin as an inscription,—thus translated:—

> "I praise the Lord for sickness chased away:
> Here to sick souls, O Christ, give health, I pray."

An effort might, without difficulty, be made to complete the peal of eight. The estimated cost is 600*l.*

**Cost of Repairing Victoria Embankment of Thames.**—The Select Committee of the House of Commons have passed the Thames Embankment Bill, which proposes to throw the cost of repairing and lighting the Victoria Embankment on the whole of the metropolis. One of the witnesses examined by the committee was Colonel Hogg, M.P., chairman of the Metropolitan Board of Works, who stated that the cost would be covered by a rate of one-tenth of a penny in the pound.

**Kent House Estate, Rutland-gate.**—Louisa, Lady Ashburton, and Colonel Spencer Clifford, have purchased the greater part of the Kent House Estate freehold, at Rutland-gate, for the erection of family mansions.

**Improvements at Blackfriars.**—An enterprising Belgian, Mr. Polydore de Keyser, of the Royal Hotel at Blackfriars, now a citizen of London, has, it is said, matured a vast plan by which a hostelry, such as can only be paralleled by that called "grand" at Paris, will be shortly added to the few handsome buildings to be seen along the river front. This hotel, when completed, will extend from the corner of William-street, along a curved frontage of 380 ft., on to the entrance of the ground at the back of the embankment, sweeping away the gasholders at Blackfriars Bridge. The hotel, the design for which is in the Modern French style, will have an entrance from the embankment into a spacious courtyard, into which carriages can drive, whilst the ground floor and basement will contain a series of elegant shops. The hotel is to be fitted up on the Continental system. Mr. Gruning is the architect, and Messrs. Trollope & Sons are the builders. The foundation stone is laid.

**Metropolitan Water Supply.**—In answer to Sir J. Kay-Shuttleworth, in the Commons, Mr. C. Fortescue said that the water companies of the metropolis had complied with the requirements of the Metropolitan Water Act of last session by submitting regulations on which they were agreed to the Board of Trade and the Metropolitan authorities, but which were of no authority till confirmed after an inquiry by the Board of Trade, at which the water and Metropolitan authorities would have the right of being heard. A circular had been sent by the Board of Trade to the authorities whose interests were affected to state their objections to the regulations, and the time of the inquiry, at the request of the Metropolitan Board of Works and the Corporation of London, had been extended to the 28th inst., but he could not say how long it would last.

**The Brenchley Garden and Chillington House.**—The extensive improvements at Chillington House, and the work of laying out the public garden to be presented to the town of Maidstone by Mr. Julius Brenchley, approach completion. Mr. Mackenzie, the landscape gardener, under whose supervision Battersea Park, Finsbury Park, and other public pleasure-grounds were laid out, has made the most of the land at the rear of Chillington House. About five acres of the old apple-orchard adjoining the private garden have been converted into a picturesque spot, and when the garden has been finished in all its details, it will form, it is said, quite a little Paradise in the centre of the town, from all parts of which it will be easily accessible. The restoration of the west wing of the house is the other chief work that is being done.

**Opening of a New Cattle Market at Leicester.**—A new cattle-market has been laid out on nearly 20 acres of land, and opened, in the south-western suburbs of Leicester, at a cost to the corporation of something like 30,000*l.* It is laid out in an improved manner, and comprises not only an area of several acres for horse fairs, but also ten slaughter-houses, in two blocks, for cattle, two for pigs, and one for condemned animals; besides offices and houses for the clerk and other officers, connected with the main line of the Midland Railway by a short branch line; while close to the market the Midland Company have, at a cost of about 10,000*l.*, constructed cattle docks, from which cattle have easy access to the market, and *vice versâ*.

**Wood *v.* Asphalte.**—While the municipal authorities in London are replacing the last relic of the old wooden pavement with asphalte, experiments with wood pavements are being made in Paris, whence we derive the asphalte system. The trials are made with rectangular blocks about 7 in. in depth by 8 in. long, and 3½ in. wide, set on a 4-in. bed of cement. The wood is suitably prepared, and rendered damp-proof beforehand, and the ends of the blocks are cut at an angle of 45 deg. The surfaces of the street are level in one case, and on a slope in another. The cost is about 10s. per square yard.—*Mechanics' Magazine.*

**New Theatre for Sheffield.**—It is proposed to build a new theatre in Sheffield. A company, we understand, is now in process of formation, and nearly half the required capital has been subscribed or promised.

**Destruction of Niblo's Theatre, New York.**—A telegram from New York states that Niblo's Theatre has been totally destroyed by fire.

**The Newcastle Antiquarian Society.**—At the monthly meeting of the Newcastle Society of Antiquaries, held on Wednesday night, in the Old Castle, the Rev. J. C. Bruce, LL.D., read a most interesting paper on his recent researches in connexion with the old bridges that crossed the Tyne at Newcastle, and the remains of them found while the excavations for the new bridge have been carried on. At its close, the learned doctor said:—"In concluding, I may say a word in reference to the bridge of the future. In order to admit of the passage of large ships to the quays above Newcastle, the roadway on each side of the central pier must be capable of speedy removal and replacement. This is to be done, as is well known, by making it swing upon a pivot. This roadway must have a stone pavement, and it must have strength enough to admit of the passage over it of a four-wheeled wagon, loaded to the extent of fifty tons. When it is borne in mind that each arm of the roadway, as it swings upon its pivot, will be 140 ft. long, the difficulties to be overcome in its construction and working will at once be seen to be very great. When it is constructed, the inhabitants of Tyneside will have to boast of the greatest work of its kind in the world."

**The German Houses of Parliament Designs.**—Ten English architects have sent in plans for the new German Houses of Parliament. The *Cologne Gazette* says they have set much value on appearance. Gigantic water-colour paintings, richly framed, represent, in the most interesting manner, the masses of buildings, with many towers, or richly crowned with mighty cupolas, with the effect of sun glances breaking through a grey, clouded sky. The German architects, whose works are modest and kept within narrower limits, will have their difficulties in presence of these fairy works as they come forth from the English fogs.

**A New Labour Bill.**—A Bill, says the London correspondent of the *Leeds Mercury*, will shortly be introduced by Mr. Morrison, which will, I am told, cause somewhat of a flutter among employers. Its object is to alter the existing law with respect to compensation granted to workmen in case of accident, and to make it more favourable to the latter. Mr. Hinde Palmer and Mr. Melly have agreed to place their names on the back of the measure, which has received the sanction and approval of the Parliamentary Committee of Trade Unions.

**The Royal Polytechnic.**—The Directors state that they have elected Professor E. V. Gardner, F.E.S., a gentleman well known for many years past as an experienced chemist, to be the Professor of Chemistry to the Institution; and under his direction the laboratory is being re-fitted and re-stocked, and will shortly be opened for the reception of pupils, and for conducting analyses, assays, and scientific investigations of every description.

**The Institution of Civil Engineers.**—Mr. Hawksley, as president of this Institution, has issued invitations for a *conversazione* in the western galleries of the International Exhibition at South Kensington, on Tuesday, the 28th of May. The portion of the buildings to be opened to guests will comprise the Machinery Court,—the machinery being shown in motion,—and the British Picture-gallery, immediately over that court.

**Busts of the late Earl of Derby and Sir R. Murchison.**—Mr. H. P. M'Carthy, of Osnaburgh-street, has just completed a bust in marble of the late Earl of Derby for the Merchant Taylors' Company. The likeness is said to be a striking one. The same sculptor has just received an order to execute a bust of another of the deceased honorary members of the company, viz., Sir Roderick Impey Murchison.

**Drainage of Weymouth.** — The Town Council of Weymouth have adopted Sir John Coode's plans for the drainage of Weymouth, instructing the Town Clerk to apply to the Local Government Board for authority to borrow 25,000*l.* on mortgage of the general district rates. The work, if carried out, will, it is said, put the town in a thoroughly sanitary condition.

**The Aquarium Clock Tower, Brighton.**—A model of a clock tower has been erected at the aquarium for the town authorities to form a judgment upon the proposed erection. The local *Herald* states that opinions differ, and thinks the design "might safely be 'referred back' to Mr. Birch for improvement."

## TENDERS

For the Congregational Memorial Hall, library, and offices, Farringdon-street. Messrs. John Tarring & Son, architects:—

| | General Estimate. | Additional cost if joiners' work is executed in pitch pine. | If Kentish rag is used instead of Berry-head limestone, deduct— |
|---|---|---|---|
| Higgs | £32,287 | £250 | £100 |
| Hill & Sons | 30,290 | 610 | 350 |
| Peto, Brothers | 29,982 | 1,000 | 470 |
| Patrick & Sons | 29,650 | 420 | 272 |
| Henshaw & Co. | 29,570 | 250 | 350 |
| Ashby & Sons | 29,260 | 420 | 350 |
| Dove, Brothers | 28,975 | 235 | 175 |
| Myers & Sons | 28,885 | 415 | 250 |
| Perry & Co. | 28,750 | 400 | 140 |
| Browne & Robinson | 28,455 | 403 | 420 |
| Kilby | 28,271 | 300 | — |
| Brass | 28,263 | 520 | 200 |
| Jackson & Shaw (accepted) | 27,370 | 288 | 95 |

For wholesale market and toy arcade, for the borough of Southport, exclusive of earthwork, drains, and paving. Messrs. Maxwell & Tuke, architects:—

| | | | |
|---|---|---|---|
| Sothern | £2,350 | 0 | 0 |
| Dawson | 2,345 | 0 | 0 |
| Wilkinson | 2,274 | 0 | 0 |
| Wade, Brothers | 2,250 | 0 | 0 |
| Duxfield | 2,181 | 0 | 0 |
| Penn & Russell | 2,154 | 0 | 0 |
| Roberts | 2,068 | 6 | 4 |
| Wishett & Irving | 1,969 | 0 | 0 |
| Heywood, Brothers (accepted) | 1,890 | 0 | 0 |

For rebuilding premises, Playhouse-yard, Whitecross-street. Mr. Henry J. Gordon, architect:—

| | | | |
|---|---|---|---|
| Ennor | £1,965 | 0 | 0 |
| Pritchard | 1,954 | 13 | 0 |
| Baughman | 1,947 | 0 | 0 |
| Chessum | 1,940 | 0 | 0 |
| Thomas | 1,939 | 0 | 0 |
| Little | 1,819 | 0 | 0 |
| Meritt & Ashby | 1,795 | 0 | 0 |
| Browne & Robinson | 1,754 | 0 | 0 |
| L. & W. | 1,623 | 0 | 0 |
| Blackmore & Morley | 1,495 | 0 | 0 |

For rebuilding No. 2, High-street, Bow, for Mr. J. W. Robey. Messrs. Hills & Fletcher, architects. Quantities supplied:—

| | | | |
|---|---|---|---|
| Coleman | £677 | 0 | 0 |
| Wicks & Bangs | 674 | 0 | 0 |
| Grover | 647 | 0 | 0 |
| Alexander | 639 | 0 | 0 |
| Sheffield | 633 | 0 | 0 |
| Aldous | 604 | 0 | 0 |
| Gregar | 588 | 0 | 0 |

For sundry alterations and repairs at the "Crown and Cooper" wine-vaults, Golden-lane, City, for Mr. Richards. Messrs. Bird & Walters, architects:—

| | | | |
|---|---|---|---|
| Perry | £429 | 0 | 0 |
| Williams & Son | 348 | 0 | 0 |
| Newman & Mann | 336 | 0 | 0 |
| Goodwin | 320 | 0 | 0 |
| Bostel | 296 | 10 | 0 |

For restoring the chancel and rebuilding the remainder of the parish church at Uzmaston. Mr. E. H. Lingen Barker, architect:—

| | | | |
|---|---|---|---|
| James (accepted) | £842 | 0 | 0 |

For the erection of a new wing to the Alexandra mills, Derby. Messrs. Giles & Brookhouse, architects:—

| | | | |
|---|---|---|---|
| J. & E. Wood | £2,820 | 0 | 0 |
| Thompson | 2,800 | 0 | 0 |
| Bridgart | 2,320 | 0 | 0 |
| Dusantoy (accepted) | 2,259 | 0 | 0 |

For the erection of a new church, at Quarndon. Messrs. Giles & Brookhouse, architects:—

| | | | |
|---|---|---|---|
| Walker & Cash | £3,698 | 0 | 0 |
| W. H. & J. Slater | 3,400 | 0 | 0 |
| Thompson (accepted) | 3,250 | 0 | 0 |

For the first block of almshouses for the Derby Licensed Victuallers' Association. Messrs. Giles & Brookhouse, architects:—

| | | | |
|---|---|---|---|
| Dusantoy (accepted) | £987 | 0 | 0 |

For dwelling-house and stabling, Sudbury, Suffolk, for Mr. T. H. Higgs. Messrs. Spalding & Knight, architects:—

| | | | |
|---|---|---|---|
| Aldous | £2,623 | 7 | 2 |
| Garwood | 2,608 | 0 | 0 |
| Nightingale | 2,430 | 0 | 0 |
| Luff | 2,399 | 0 | 0 |
| Andrews | 2,388 | 0 | 0 |
| Grimwood & Sons | 2,383 | 0 | 0 |
| Gibbons | 2,366 | 5 | 3 |
| Hall | 2,349 | 0 | 0 |
| Stephenson (accepted) | 2,103 | 0 | 0 |

For alterations to Nos. 61 and 62, Paternoster-row. Messrs. Spalding & Knight, architects:—

| | | | |
|---|---|---|---|
| Newman & Mann | £576 | 0 | 0 |
| Patman & Fotheringham | 525 | 0 | 0 |
| Pritchard | 505 | 0 | 0 |
| Pitcher | 499 | 10 | 0 |
| Scrivener & White (accepted) | 476 | 0 | 0 |

For Congregational Chapel, at Sutton Valence, Kent. Messrs. Sulman & Rhodes, architects. Quantities supplied:—

| | | | |
|---|---|---|---|
| Martin | £1,753 | 0 | 0 |
| Small | 1,725 | 0 | 0 |
| Cook | 1,680 | 0 | 0 |
| Waterson | 1,670 | 0 | 0 |
| Tunbridge & Denne | 1,615 | 0 | 0 |
| Richardson | 1,530 | 0 | 0 |
| Clements | 1,530 | 0 | 0 |
| Dover & Co. | 1,515 | 0 | 0 |
| Cornelius | 1,457 | 0 | 0 |
| Avard | 1,450 | 0 | 0 |
| Cox, Brothers | 1,348 | 0 | 0 |
| Bridge | 1,343 | 0 | 0 |
| Godden | 1,300 | 0 | 0 |
| Wright, Brothers, & Goodchild | 1,275 | 0 | 0 |

For erection of vicarage-house, Holy Trinity, Gravesend, for Rev. J. Scarth. Mr. E. H. Martineau, architect:—

| | | | |
|---|---|---|---|
| Hayley | £3,247 | 10 | 0 |
| Scrivener & White | 2,910 | 0 | 0 |
| Newman & Mann | 2,888 | 0 | 0 |
| Manley & Rogers | 2,806 | 0 | 0 |
| Longmire & Burge | 2,710 | 0 | 0 |
| Gould | 2,639 | 0 | 0 |
| Blake (accepted) | 2,557 | 0 | 0 |

For the completion of two pairs of villa residences, Nos. 1, 2, 3, and 4, Glebe Villas, Mitcham, Surrey. For Mr. C. W. Drury:—

| | | | |
|---|---|---|---|
| Johnson | £1,947 | 0 | 0 |
| Catull & Co. | 1,595 | 0 | 0 |
| Collins | 1,512 | 0 | 0 |
| Dover, Wells, & Co. | 1,349 | 0 | 0 |
| Slatford | 1,250 | 0 | 0 |
| Loud | 1,200 | 0 | 0 |
| Bretnall (accepted) | 1,160 | 0 | 0 |
| Kelham, Brothers, & Co. | 1,145 | 0 | 0 |

For the restoration of Botus Fleming Church, Cornwall. Mr. H. Elliott, architect:—

| | | | |
|---|---|---|---|
| Sanders | £899 | 0 | 0 |
| Call & Pethick | 872 | 10 | 0 |
| Stevenson & Son | 853 | 8 | 0 |
| Shaddock | 834 | 0 | 0 |
| Bishop & Son | 815 | 0 | 0 |
| Channon | 800 | 0 | 0 |
| Bone & Son | 764 | 0 | 0 |
| Clarke | 710 | 9 | 0 |
| Crocker & Brimblecombe | 666 | 2 | 7 |
| Dingle & Co. | 664 | 0 | 0 |
| Blowey | 650 | 0 | 0 |

For alterations and additions to house, at Fairmile, Esher, Surrey. Mr. Herbert Winstanley, architect:—

| | | | |
|---|---|---|---|
| Axford | £1,253 | 0 | 0 |
| Wood | 1,144 | 0 | 0 |
| Mason | 1,018 | 0 | 0 |

For alterations and additions to 185, High-street, Camden-town. Messrs. Newman & Hewett, architects:—

| | | | |
|---|---|---|---|
| Newman & Mann | £610 | 0 | 0 |
| Scrivener & White | 585 | 0 | 0 |
| Foxley | 564 | 0 | 0 |
| Fairchild & Co. | 549 | 0 | 0 |

For alterations to house on the Ridgeway, Enfield, for Mr. Nott. Mr. T. J. Hill, architect:—

| | | | |
|---|---|---|---|
| Bayes & Rammage | £406 | 0 | 0 |
| Rist & Brown | 370 | 0 | 0 |
| L. & W. D. Patman | 368 | 0 | 0 |

For drainage to Belsize House, Hampstead, for Mr. W. H. Stallard. Mr. C. H. Lowe, architect:—

| | | | |
|---|---|---|---|
| Hart | £320 | 0 | 0 |
| Mansbridge | 259 | 0 | 0 |
| Watts | 237 | 0 | 0 |
| Crockett | 225 | 0 | 0 |
| Thirst | 213 | 0 | 0 |

For Primitive Methodist chapel and schools, Williamson-street, Holderness-road, Hull. Mr. Frank N. Pettingell, architect:—

| | | | |
|---|---|---|---|
| W. & J. Hall (accepted) | £5,950 | 0 | 0 |

For alterations, &c. at No. 7 Ward, Peckham House Lunatic Asylum. Messrs. Tolley & Dale, architects:—

| | | | |
|---|---|---|---|
| Wicks, Bangs, & Co. (accepted) | £615 | 0 | 0 |

For pulling down and rebuilding 75, Oxford-street, for Mr. Ince. Messrs. Tolley & Dale, architects:—

| | | Party-wall. |
|---|---|---|
| Macey | £3,366 | ..... — |
| Conder | 3,059 | ..... £184 |
| Pritchard | 3,034 | ..... 192 |
| Wicks, Bangs, & Co. | 2,839 | ..... 178 |
| Scrivener & White (accepted) | 2,814 | ..... 168 |

For erection of new schools and teachers' residences, at Church Langton, Leicestershire. Mr. J. Goddard, architect:—

| | | | |
|---|---|---|---|
| Bachelor | £2,700 | 0 | 0 |
| Tomlinson | 2,700 | 0 | 0 |
| Fox | 2,695 | 0 | 0 |
| Mayfield | 2,513 | 0 | 0 |
| Flude | 2,506 | 0 | 0 |
| Stanyon | 2,503 | 0 | 0 |
| Mattock | 2,497 | 0 | 0 |
| Mason & Sons (accepted) | 2,490 | 0 | 0 |
| Loveday | 2,359 | 7 | 6 |

For extension of shops and repairs to two houses, 444 and 446, Edgware-road, for Mr. J. Windle. Messrs. New & Cumings, architects. Quantities supplied:—

| | | | |
|---|---|---|---|
| Green | £605 | 0 | 0 |
| Mark | 592 | 0 | 0 |
| Thompson & Smith | 583 | 0 | 0 |
| Ebbs & Son | 574 | 0 | 0 |
| Harris & Sons | 548 | 0 | 0 |

## TO CORRESPONDENTS.

G. [H. Y. (" Gefle timber" is timber from Gefle, in Sweden).—B. O. J. (our correspondent wishes to build a concrete house, and desires to know to whom he should apply. We have found so little satisfaction on previous similar occasions, that we decline to recommend).—A Leaseholder (the ordinary result of wear : not broken or destroyed by violence).—W. D.—W. L. C.—T. O.—A. F. & Co.—A. L. E. M.—W. H. W.—F. & Co. — T. M. — W. S. — Mr. O'D.—J. F. H.—H. W.—McN. — J. S. — S. J. N.—A. T.—S. & K. —Mr. R.—H. E.—A Builder's Foreman. — A. & H. — S. M. — C. — J. M. R. — J. F. — H. & Sons.—B. L.—D. C. H.

*Erratum.*—In notice of designs by Messrs. Alexander & Henman, at International Exhibition (p. 338, *ante*), for "Stockport" School Board, read *Stockton* School-board.

We are compelled to decline pointing out books and giving addresses.

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## CONTRACTS—*Continued from p. ii.*

PARISH CHURCH of BUILTH, Radnorshire. — Builders are invited to submit TENDERS for RE-BUILDING the PARISH CHURCH of Builth. The plans and specification may be inspected on and after the 1st day of MAY, at the Office of EVAN OWEN, Esq. at Builth. Quantities (prepared by Mr. THACKER, Surveyor) may be had of Mr. OWEN, on payment of 1*l.* 1s. (to be returned on receipt of Tender). The Tenders to be forwarded by the 18th of MAY to the Architect, JOHN NORTON, Esq. 24, Old Bond-street, London, W. The Committee and Churchwardens do not bind themselves to accept the lowest or any Tender submitted.

BRIGHTON AQUARIUM.—To IRON-FOUNDERS and OTHERS.—The directors are prepared to receive TENDERS for CAST-IRON GATES, RAILINGS, &c. at the BRIGHTON AQUARIUM. Persons desirous of Tendering may inspect the drawings and specification upon application at the Aquarium Works, Brighton, on and after THURSDAY next, MAY 9th.
Tenders to be delivered at the Aquarium Works, by TWELVE o'clock, p.m. on SATURDAY, MAY 18th. The directors do not bind themselves to accept the lowest or any Tender.
Brighton, May 8th, 1872.

GREENWICH DISTRICT BOARD of WORKS.—To PAVING CONTRACTORS and OTHERS.—The Board of Works for the Greenwich District are prepared to receive TENDERS for Laying Down TOOLED YORK PAVING, ABERDEEN GRANITE KERB and CUBES, and providing other Materials and doing other Works in Edward-street East, Hamilton-street, Hyde-street, Regent-street, Giffin-street, and Saint John's-road, all in the parish of Saint Paul, Deptford, in the above District. The specification and plans can be seen, and other particulars, and forms of Tender obtained, on application at the Clerk's Office, Church-street, Greenwich, any day between the hours of TEN and FOUR o'clock (on Saturdays between TEN and TWO o'clock). Tenders must be sent in on the printed form, sealed up, and endorsed "Tender for Paving Old Streets," before FOUR o'clock in the afternoon of WEDNESDAY, the 22nd inst. The Board do not bind themselves to accept the lowest, or any, or either, of the Tenders sent in.—By order,
E. W. JAMES, Clerk to the Board.
Greenwich, 9th May, 1872.

GREENWICH DISTRICT BOARD of WORKS.—To PAVING CONTRACTORS and OTHERS.—The Board of Works for the Greenwich District are prepared to receive TENDERS for Laying Down TOOLED YORK PAVING, GRANITE and PURBECK KERB, and GRANITE CUBES for Channels and Crossings, and for other Matirials and Works in Albert-road, Tressillian-road, Angus-street, Augustus-street, Snead-street, and Pagnall-street, St. Paul's, Deptford. The specifications and plans can be seen and other particulars obtained on application at the Clerk's Office, Church-street, Greenwich, any day between the hours of TEN and FOUR o'clock (on Saturdays between TEN and TWO o'clock). Separate Tenders must be sent in for the works in each street, sealed up and endorsed "Tender for Paving New Streets," before FOUR o'clock in the afternoon of WEDNESDAY, the 22nd instant.—The Board do not bind themselves to accept the lowest or any or either of the Tenders sent in.—By order,
E. W. JAMES, Clerk to the Board.
Greenwich, 9th May, 1872.

TO MASONS and PAVIORS.—The Board of Works for the Wandsworth District are desirous of receiving TENDERS for the providing and fixing of about 1,000 yards of 3-inch TOOLED YORK PAVING, and other WORKS in connexion therewith, in High-street, Clapham. The specification and drawing may be seen, and all further information obtained, with form of Tender, on application at the Office of Mr. A. SOUTHAM, 60, Old Town, Clapham, between the hours of NINE and TEN a.m. Tenders are to be sent in, under seal, to the Board, endorsed "Tender for Paving," on or before TUESDAY, the 14th inst. Persons tendering must be in attendance at the Offices of the Board, Battersea-rise, at FOUR o'clock p.m. on WEDNESDAY, the 15th inst. when the Tenders will be opened. The Tenders must contain the names and addresses of two responsible persons, to join the contractor in a contract for the due execution of the work. The Board do not pledge themselves to accept the lowest or any Tender.—By order of the Board of Works for the Wandsworth District.
ARTHUR ALEXR. CORSELLIS, Clerk to the Board.
Battersea-rise, S.W. May 2, 1872.

BIRMINGHAM GAS-LIGHT and COKE COMPANY.—The Directors invite TENDERS for the PURCHASE of the whole of the GAS TAR manufactured at their several stations, in quantity about 5,000 tons per annum, for a term not exceeding three years from the 1st July next. The Tar will be delivered free into the purchaser's boats at the Works.
Tenders must be endorsed "Tender for Gas Tar," and delivered to the Secretary not later than the 22nd inst.
The Directors do not bind themselves to accept the highest or any Tender.—By order, JOSEPH SLOCOMBE, Secretary.
Offices, 23, Union-street, Birmingham,
2nd May, 1872.

W. H. BARBER, Surveyor, 12, Buckingham-street, Strand, W.C. twenty years with Messrs. Myers and Messrs. Mansfield, has REMOVED his OFFICES to the above address. Quantities and Estimates prepared, and every kind of assistance rendered on moderate and mutual terms. DISPUTED AND INTRICATE ACCOUNTS ESPECIALLY ATTENDED TO.

LITHOGRAPHED BILLS of QUANTITIES, SPECIFICATIONS, &c. — ROBERT J. COOK & HAMMOND have made such arrangements for this special description of Lithography, that orders to any extent are completed in a given time, under the personal superintendence of one of the firm, thus ensuring accuracy and promptness. Plans and Drawings of every description Copied, Traced, or Lithographed.—ROBERT J. COOK & HAMMOND, Draughtsmen, Lithographers, &c. 29, Charing-cross.

ARCHITECTURAL MODELS. Mr. W. NICOL, 148, CHURCH-ROAD, ISLINGTON, undertakes to make MODELS from drawings or buildings. His models have been very successful. First-class references and testimonials.

BRICKWORK TO LET. Labour and Scaffolding for about 50 Rods, and Pointing, near Bromley, Kent. — Apply to JOHN GROVER, Builder, Packington-street, Islington.

TO ARCHITECTS, HOUSE AGENTS, &c.
GENERAL REPAIRS of HOUSES, ALTERATIONS, &c. WANTED, by a BUILDER and HOUSE DECORATOR, of twenty-five years' practical experience.—Address, 369, No. 7, Townshend-road, St. John's Wood ; or 56, Earl's-court-road, Kensington, W. P.S. Greenhouses and Conservatories built.

NOTICE.—To SURVEYORS and OTHERS.—The Kingston-upon-Hull School Board will proceed, on the 22nd inst. to the ELECTION of a SURVEYOR, at a salary of 200*l.* per annum, whose duties shall be to examine and report upon, survey and measure school sites, adapt and prepare plans for the erection of schools, superintend the erection and fitting of schools, survey school premises previous to transfer to the Board, examine and report upon questions of extension, alteration, repairs, and other matters relating to the property of the Board, and generally to act under the direction of the Board and its committees.
He will be required to devote the whole of his time to the service of the Board, and the appointment will be made subject to three months' notice on either side.
Applications, endorsed "Surveyor," to be sent in not later than the 18th inst. to
D. JNO. O'DONOGHUE, Clerk to the Board.
Town-hall, Hull, 1st of May, 1872.

TO SURVEYORS' ASSISTANTS.
WANTED, in a QUANTITY SURVEYOR'S OFFICE, an ASSISTANT accustomed to abstracting and a neat draughtsman.—Address, M. at Mrs. Plummer's, Stationer, 46, Theobald's-road, W.C.

WANTED, a first-class GOTHIC DRAUGHTSMAN.—Address, X. care of Mr. Bruce, 26, Saint Ann's-street, Manchester.

TO DRAUGHTSMEN.
WANTED, temporarily, for a Competition, a first-class GOTHIC DRAUGHTSMAN. None but good men need reply.—Apply to JOHN KENNEDY, 46a, Pall-mall, S.W.

WANTED, in an Architect's Office about thirty miles from London, a good and experienced GOTHIC and PERSPECTIVE DRAUGHTSMAN, accustomed to all office routine.—Apply, stating references, terms, age, &c. to A. R. Messrs. Hodder & Stoughton, 27, Paternoster-row, E.C.

WANTED, a good DRAUGHTSMAN. Must know perspective and be a good colourist.—Apply with specimens, to J. WEEKS & CO. Horticultural Builders and Hot-water Apparatus Manufacturers, 126, King's-road, Chelsea.

TO AUCTIONEERS' AND SURVEYORS' CLERKS.
WANTED, in the Office of an Auctioneer, Estate Agent, Surveyor, and Accountant, in a rapidly-increasing town and watering-place in the west, a CLERK who is well educated, writes a good hand, and has had some experience in such an Office. Salary, 60*l.* a-year, rising at least 10*l.* annually.—Apply with copies of testimonials, stating age, experience, &c. to A. B. Post-office, Weymouth.

TO BUILDERS' CLERKS.
WANTED, an experienced Man, as PRIME COST CLERK in a Decorating and General Repairing firm. Must be competent to take out quantities, estimate for general work, &c.—Apply by letter, stating experience, age, and salary required, &c. to H. H. at Mr. Manwell's, 8, Wardour-street, Oxford-street.

WANTED, a CLERK of the WORKS, on an extensive ESTATE in the County of Dorset. He will be required to draw plans, and make estimates of all buildings and repairs, to superintend all the carpenters and masons employed on the estate, to measure timber, also masons' and carpenters' work done by contract or otherwise, and to be under the superintendence of the steward of the estate. Age not under thirty, and salary about 25s. per week, with a good cottage and garden and carriage of fuel.—Apply to S. STROUD, Builder, West Stafford, Dorchester, Dorset.

WANTED, by a Country Builder, at a moderate salary, a competent ASSISTANT, who understands measuring, estimating, and bookkeeping. To a trustworthy suitable person the engagement would be permanent.—Address, stating age and salary required, to 403, Office of "The Builder."

TO WOOD CARVERS.
WANTED, good CARVERS, used to Gothic work.—Apply to J. OSMOND, 2, Short-street, Tabernacle-square, Finsbury.

WANTED, several WOOD CARVERS, CABINET-MAKERS, and ONE or TWO FURNITURE DESIGNERS.—MORRIS & NORTON, Bull-street, Birmingham.

TO TILE FIXERS.
WANTED, an experienced HAND, for constant work.—Apply at once, to W. B. SIMPSON & SONS, No. 456, West Strand, W.C.

WANTED, an experienced FOREMAN, to carry out some large GAS TANKS.—Apply by letter, with references, experience, &c. to B. care of Mr. Smith, 11, Duke-street, Adelphi, W.C.

WANTED, immediately, an energetic and systematic WORKING SHOP FOREMAN of JOINERS. Those having filled a like situation can address, with references, and wages required, to W. B. care of Mrs. Sayer, Stationer, Maryland Point, Stratford, E.

WANTED, immediately, a first-class MECHANIC, who thoroughly understands GASFITTING, BELLHANGING, and general Smiths' work.—Apply, stating terms and references, to BROWN & SON, Ironmongers, &c. Windsor.

WANTED, immediately, a good GRAINER, WRITER, and PAPERHANGER. One accustomed to country work preferred. The situation for a constancy. Wages, 28s. and 30s. A reference required.—Address, M. HINDE, 2, St. Paul's-square, Bedford.

WANTED, a thoroughly practical WORKING SHOP FOREMAN of JOINERS. Must be well up in setting out work, and understand drawings and machinery. None need apply unless thoroughly competent.—Apply, stating age and salary required, and giving names of references, to G. N. A. No. 38, Northgate-street, Gloucester.

TO GILDERS.

WANTED, immediately, a GILDER, on a Job.—Apply, stating wages, to M. A. H. Post-office, Newbury.

WANTED, a good GASFITTER. Would be wanted occasionally to drive a steam launch. Constant employment. Wages, 26s. per week.—Apply to W. H. Book-stall, Portsmouth Station.

TO GRAINERS AND PAPERHANGERS.

WANTED, for a CONSTANCY, MEN who can do good and inferior WORK, and are willing to fill up time painting.—Send terms to JOHN GROVER, Builder, Packington-street, N.

TO DECORATORS.

WANTED, in a Wholesale Paper Staining Firm, a useful LAD to ASSIST in the WAREHOUSE. Must be hardworking and industrious, and have some knowledge of the business.—Apply, by letter, stating particulars, to Messrs. A. & R. WILCOXON, 17, Newington-causeway, London, S.E.

TO CEMETERY MASONS.

WANTED, a first-class MASON, well up in Cemetery and Monumental Work, and able to do a little drawing and carving. Age from 25 to 45. Steady and expert. Character and ability able to bear strict investigation.—Apply, stating wages required, &c. to W. J. GLEAVES, Greenwich-road, S.E.

WANTED, a good BUILDER'S CARMAN. Personal character indispensable.—Apply between ELEVEN and TWELVE o'clock at 24, Bishopsgate Without.

TO GLASS PAINTERS.

WANTED, for constant EMPLOYMENT, a thoroughly experienced GENERAL HAND.—Apply to W. B. SIMPSON & SONS, 456, West Strand, W.C.

PUPIL.—A CIVIL ENGINEER, having works of considerable magnitude in operation, has a VACANCY in his Office for a PUPIL. The district in which the works are situated being one of considerable extent and importance, affords unusual opportunities for the acquirement of engineering experience.—Address, A. B. 21, Gresham-street, E.C.

A PUPIL WANTED in an old-established ARCHITECT'S and SURVEYOR'S Office.—Address, B. 11, Westgate, Rotherham.

ARCHITECT'S ASSISTANT WANTED, in a City Office. Thoroughly qualified, familiar with iron construction, and Italian ornament.—Apply, by letter, to H. W. B. 16, Walbrook, E.C.

AN ASSISTANT REQUIRED, fully competent to prepare complete sets of drawings from rough sketches.—Address, with terms and references, to ARCHITECT, care of John Lee & Co. 2, Bride-court, New Bridge-street, E.C.

TO ARTISTS IN STAINED GLASS.

A GOOD DRAUGHTSMAN WANTED. Apply to WARD & HUGHES, 67, Frith-street, Soho-square.

CLERK WANTED for COST BOOK in CABINET FACTORY.—Apply by letter, stating age, experience, and salary expected, to C. HINDLEY & SONS, 134, Oxford-street.

CLERK REQUIRED in an ENGINEER'S OFFICE. Must be a good tracer, and accustomed to the routine of an engineer's or surveyor's office.—Apply on or before MONDAY, 13th instant, stating salary required, to the Borough Surveyor, Barrow-in-Furness.

CARPENTER and BLIND MAKER WANTED. Also the above BUSINESS, with general house repairs, TO BE DISPOSED OF (no other in the line) solely through illness. References.—Address, G. B. E. Rochester-terrace, Colney Hatch.

FOREMAN of PAINTERS WANTED.—Address, 431, Office of "The Builder," stating name and residence, age, wages, qualifications, by whom last employed and for how long. Good personal character for sobriety, punctuality, integrity, efficiency, and willingness to fill up time with work, indispensable. A good pencil hand or grainer, and decorative abilities desirable.

GOOD BRASS and IRON TURNER and FITTER WANTED.—Apply, between Nine and Ten, 42 Huntingdon-street, Caledonian-road, N.

TO BUILDERS AND OTHERS.

WANTED, a SITUATION, as MACHINIST. Can work saw-bench, frame, moulding machine, or general joiner.—Address, X. Y. Z. care of Mr. Abbott, Mistley Park, Essex.

WANTED, a SITUATION as GENERAL FOREMAN. Aged 35. Town or country. Good references. Address, J. D. 2, Chandos-street, Covent Garden.

TO BUILDERS, PLUMBERS, AND OTHERS.

WANTED, a SITUATION, by a good PLUMBER, GASFITTER, and ZINCWORKER.—Address, S. GREEN, 21, Mosedale-street, Church-street, Camberwell-green.

WANTED, a SITUATION, as CLERK of WORKS. First-class testimonials. No objection to go abroad.—Address, J. W. 6, Friar's-terrace, Curzon-street, Derby.

TO BUILDERS AND DECORATORS.

WANTED, a SITUATION, as DECORATIVE PAPERHANGER, piecework or by the day. Can do painting.—Address, E. ASHEY, Decorator, 32, Cunard-street, Albany-road, Camberwell.

YARD FOREMAN.

WANTED, a SITUATION in BUILDER'S or TIMBER MERCHANT'S YARD. Ten years' character. Can take charge of engine if required.—Address, C. B. 7, Goss-place, Greenwich-road, Greenwich, Kent.

TO BREWERS, WRITERS, AND OTHERS.

WANTED, a SITUATION, by a steady Young Man (good writer). Wages not so much an object as a good situation.—Address, 415, Office of "The Builder."

WANTED, a SITUATION, as YARD or SHOP FOREMAN of JOINERS. Reason for desiring change, and highest testimonials of many years' service and competence for above position from present employers, an eminent London firm of builders, will be freely given. Accustomed to charge of machinery.—Address, ALPHA, 103, East-road, City-road.

TO BUILDERS, WITH MACHINERY.

WANTED, as SHOP-FOREMAN, an ENGAGEMENT, or as CLERK of WORKS on a gentleman's estate, by a practical JOINER and MACHINIST. Well up in construction, repairs, horticultural buildings, &c. Any party stirring joiners' machinery, may secure my fifteen years' experience as foreman at a low salary for a permanency.—Address, M. N. 16, Campden-street, Kensington.

TO BUILDERS AND CONTRACTORS.

WANTED, to TAKE BRICKWORK by the rod (labour only), or a RE-ENGAGEMENT as MANAGING FOREMAN of New Buildings. Can have first-class references from late employers.—Address, A. F. No. 21, Robert-street, Hampstead-road, N.W.

WANTED, by a BRICKLAYER, a CONSTANT PLACE, as JOBBING BRICKLAYER. Address, M. B. No. 2, Melcombe Mews, Dorset-square.

WANTED, constant EMPLOYMENT as PAPERHANGER. No objection to fill up time painting, &c. Address, W. P. 18, Lord's-buildings, York-road, Wandsworth.

SAW-MILLS.

WANTED, EMPLOYMENT in the above. To work frame or bench.—Address, W. H. 7, Goss-place, Greenwich-road, Greenwich, Kent.

WANTED, an ENGAGEMENT, as CLERK of WORKS, or FOREMAN of WORKS. Has just finished a large job in Sussex. Good references.—Address, Mr. R. MARSHALL, Barnham, Arundel, Sussex.

WANTED, an ENGAGEMENT as DRAUGHTSMAN, COLOURIST, QUANTITY CLERK, &c. Aged 39, married. Town or country. Or as CLERK to a Builder, Contractor, Engineer, &c. Terms from 32s. 6d. weekly.—Address, D. 1, Mount-villas, Puckeridge, Ware.

WANTED, an ENGAGEMENT as OUT-DOOR and GENERAL FOREMAN, or to take charge of a building job or alterations. Carpenter and Joiner by trade. Age, 33. Address, J. C. 15, Garnault-place, E.C.

TO ARCHITECTS, BUILDERS, AND OTHERS.

WANTED, an ENGAGEMENT, by a thoroughly experienced FOREMAN of MASONS, who has had the management of many large and important buildings. If preferred will take labour piecework. First-class references.—Address, A. Z. 1, Whittington-road, Peckham, S.E.

TO CIVIL ENGINEERS, &c.

WANTED, a permanent ENGAGEMENT as DRAUGHTSMAN. Has been engaged for the past sixteen years on plans, &c. or large public gas, water, and drainage works, and previously two years with an architect. Good references, &c.—Address, C. E. 24, Stockbridge-terrace, Pimlico, London, S.W.

TO BUILDERS AND CONTRACTORS.

WANTED, a RE-ENGAGEMENT as GENERAL FOREMAN. Joiner by trade. Age, 34. Town or country. Good references and testimonials.—Address, S. M. 9, Grosvenor-park, Camberwell, London, S.E.

WANTED, a RE-ENGAGEMENT, as GENERAL FOREMAN. Good draughtsman. Satisfactory references.—Address, G. S. 8, Wickwood Dairy, Eastlake-road, Cold Harbour-lane, Camberwell, S.E.

TO BUILDERS AND OTHERS.

WANTED, a RE-ENGAGEMENT, as FOREMAN of BRICKLAYERS, or to take PIECEWORK. Many years' experience. Good references.—Address, W. O. 291, East India-road, Poplar, E.

WANTED, a RE-ENGAGEMENT, by a FOREMAN of twenty years' experience. Can set out and manage all descriptions of work, assist in the office, &c. Town or country.—Address, PLANE, Mr. Dee, 4, Ann's-place, Westham-lane, Stratford, E.

TO ARCHITECTS AND BUILDERS.

WANTED, a RE-ENGAGEMENT, as CLERK of WORKS, or GENERAL FOREMAN. Just finished a large job. Joiner by trade. Aged 39. Good references.—Address, G. W. 180, King's-road, Chelsea.

TO BUILDERS AND CONTRACTORS.

WANTED, a RE-ENGAGEMENT, by a good JOINER. Sashes and frames, doors, boxing-shutters, &c. or other joiners' work, by the piece or otherwise, at moderate prices. Good references and security if required.—Address, COOMBE, Tenby Villa, Harvist-road, Hornsey-road, Holloway.

TO ARCHITECTS AND SURVEYORS.

WANTED, a RE-ENGAGEMENT, by a good DRAUGHTSMAN, in an ARCHITECT'S OFFICE Used to preparing drawings from rough sketches, perspectives, and the general routine of the office. Good penman. Unexceptionable references.—Address, OMNIA, Post-office, Knightsbridge, S.W.

TO BUILDERS AND DECORATORS.

WANTED, a RE-ENGAGEMENT, as WORKING FOREMAN of PAINTERS, or to SUPERINTEND a BUSINESS. No objection to book-keeping in spare time. Good testimonials from past and present employers.—Address, X. Y. Z. No. 2, Wanless-road, Camberwell, S.E.

TO BUILDERS AND CONTRACTORS.

WANTED, a RE-ENGAGEMENT, as CHIEF CLERK or BUILDER'S MANAGER, in Town or country, by a first-class estimator, of twenty years' experience. Is thoroughly practical. Good draughtsman, surveyor, and correspondent. First-class references.—Address, QUANTUM, 6, Irving-grove, Stockwell-green.

WANTED, a RE-ENGAGEMENT, as SHOP FOREMAN, OUT-DOOR FOREMAN, or CLERK of WORKS, by a thoroughly practical London BUILDER'S FOREMAN. Joiner and staircase-hand by trade. Aged 34. Good draughtsman, and well up in piecework and machinery of all kinds. No objection to fill up time in the office or at the bench. First-class testimonials.—Address, A. B. 45, Goldington-street, St. Pancras-road.

TO ARCHITECTS, BUILDERS, OR CONTRACTORS.

WANTED, a RE-ENGAGEMENT, either as CLERK of WORKS or GENERAL FOREMAN of WORKS, having just completed a three years' engagement on large works in the City; also had great experience upon tidal or seaside sewer works, and all kinds of public works.—First-class references.—Address, B. 2, Alexander Cottage, Fairfield-road, Bow, E.

TO ARCHITECTS AND BUILDERS.

WANTED, a RE-ENGAGEMENT, by a thoroughly practical CLERK of WORKS, or Builder's Foreman. First-class references and testimonials. Over twenty years' experience. Well up in all branches of the building trade. Thoroughly experienced in Early English and Perpendicular work, and preparing working drawings. Aged 40. Joiner by trade.—Address, A. B. Millhill Post-office, London, N.W.

TO PAINTERS, DECORATORS, &c.

WANTED, a RE-ENGAGEMENT as MANAGER and FOREMAN. Age, 42. Twenty-eight years' practical experience. Knows P.C. well. Can measure and value work, and keep books, having filled a similar position for the past twelve years. Country not objected to.—Terms, &c. address R. F. J. care of Mr. Harden, 22, Shepperton-street, New North-road, Islington, London, N.

TO BUILDERS AND CONTRACTORS.

WANTED, by an experienced LONDON FOREMAN, a RE-ENGAGEMENT as FOREMAN of BRICKLAYERS, CLERK of WORKS, or to Take Charge of a Job. Good reference.—Address, W. H. No. 5, Moor-lane, Loughborough, Leicester.

TO BUILDERS.

WANTED, by an experienced BUILDER'S CLERK, a RE-ENGAGEMENT. Estimating, measuring, and drawing. Good references. Practically acquainted with the business.—Address, No. 495, Post-office, 267, Wandsworth-road, S.W.

WANTED, by an experienced PAINTER, who can do paperhanging, gilding, graining, &c. a SITUATION as WORKING FOREMAN of PAINTERS, or otherwise. Address, PAINTER, Two Doors from Post-office, Parson's Green-lane, Fulham, S.W.

TO ARCHITECTS AND OTHERS.

WANTED, by an experienced DRAUGHTSMAN, EMPLOYMENT. Accustomed to prepare finished, working, and detail drawings, to design, &c. and is well up in construction.—Address, X. Y. Z. 9, Canon-street, Union-square, Islington, N.

WANTED, by an experienced DRAUGHTSMAN, a permanent ENGAGEMENT.—Address, H. B. care of Mr. Howe, Peabody-square, Lawrence-street, Chelsea.

WANTED, by an ASSISTANT, an ENGAGEMENT. Has had experience in Town and country. Address, R. W. 12, Salem-street, Bradford, Yorkshire.

TO ARCHITECTS, SURVEYORS, &c.

WANTED, by an ARCHITECTURAL ASSISTANT, a RE-ENGAGEMENT. Experience in London of twelve years. Terms about 2 guineas per week.—Address, 424, Office of "The Builder."

TO ARCHITECTS.

WANTED, by a DRAUGHTSMAN, thoroughly acquainted with detail, construction, &c. a permanent ENGAGEMENT in London. Aged 23. Terms, 2l. 10s. per week.—Address, J. R. JOHNS, Geo. Duncan & Co. 2, East India-avenue, Leadenhall-street, E.C.

TO ARCHITECTS.

WANTED, by a Young Gentleman, an ENGAGEMENT as ASSISTANT. Is a good perspective and constructional draughtsman, able to take out quantities, outdoor work, &c. Good references.—Address, 380, Office of "The Builder."

TO GRAINERS, &c.

WANTED, by a Young Man, EMPLOYMENT at the GRAINING, &c. Has had good experience. Wages moderate.—Address, F. M. 42, Rathbone-place, W.

WANTED, by a Young Man, EMPLOYMENT, as a CARPENTER. Wages moderate, if constant.—Address, H. W. S. 23, North-street, Edgware-road.

WANTED, by a Young Man, a RE-ENGAGEMENT as FOREMAN of PAINTERS, &c. Has a thorough practical knowledge of first-class work. Good experience in writing, graining, and decorating. Well up in measuring and estimating. Specimens and designs can be shown. First-class testimonials.—Address, W. M. 201, King's-road, Chelsea.

TO PLUMBERS AND BUILDERS.

WANTED, by a steady Young Man, aged 26, a SITUATION, as THREE-BRANCH HAND. Can also make himself useful in gasfitting, &c. zinc-work, roof and drain work, &c.—Address, G. W. J. 41, Hampden-street, Harrow-road, W.

TO GRAINERS, WRITERS, &c.

WANTED, by a respectable Young Man, aged 22, a SITUATION as IMPROVER. London preferred.—Address, stating terms, to J. F. LENTHALL, Painter, &c, Langport, Somerset.

WANTED, by a respectable Young Man, EMPLOYMENT as PAPERHANGER. Willing to fill up his time with painting, &c.—Address, B. F. 19, Marlborough-square, Chelsea.

TO PLUMBERS, GASFITTERS, &c.

WANTED, by a respectable Young Man, a SITUATION in the above, as LABOURER or IMPROVER. Town or country.—Please to address, stating wages, S. L. Howard's Printing-office, Sydenham, S.E.

TO BUILDERS, PLUMBERS, AND OTHERS.

WANTED, by a respectable married Man, EMPLOYMENT, as PLUMBER, GASFITTER, and PLAIN ZINC-WORKER. Thoroughly understands pump, bath, and closet work. Well up in new and repairing work. Would take charge of a branch establishment. Reference. State wages given.—Address, MARTIN, 1, Francis-street, London-street, Paddington, W.

TO PLUMBERS AND BUILDERS.

WANTED, by a respectable married Man, aged 32, a SITUATION as first-class PLUMBER, GASFITTER, and ZINC WORKER. Has been accustomed to all sorts of old and new work. Can fill up time painting. Good references if required.—Address, T. EAGLES, 2, Ainger-road, Primrose-hill, N.W.

WANTED, by a practical Man, a SITUATION as OUT-DOOR FOREMAN, or CHARGE of a JOB. Is well up in all branches, setting out, and management of men. Carpenter. No objection to the country.—Address, 477, Office of "The Builder."

TO PEUMBERS, BUILDERS, AND OTHERS.

WANTED, by a good PLUMBER, &c. a constant SITUATION or JOB. Willing to fill up time at painting or glazing, &c.—Address, W. H. 69, Napier-street, City-road, Hoxton, N.

TO BUILDERS AND PLUMBERS.

WANTED, by the Advertiser, a SITUATION or JOB as PLUMBER. Willing to fill up time if required.—Address, A. W. 32, Brindley-street, Paddington.

TO BUILDERS, CONTRACTORS, AND OTHERS.

WANTED, by the Advertiser, aged 17, a RE-ENGAGEMENT in an Office (Town preferred) where he would have an opportunity of improving himself in keeping the books, taking out quantities, estimating, &c.—Address, F. A. M. 3, Rodney-street, Pentonville, N.

TO BUILDERS, &c.

WANTED, by an active, elderly Man, a SITUATION as CLERK, and to make himself generally useful.—Address, W. S. No. 12, Wilton-terrace, Arthur-street, Old Kent-road, S.E.

WANTED, by a thoroughly good CHURCH, HOUSE, and DECORATIVE PAINTER, CHARGE of a JOB, or WORKING FOREMAN. Country no objection.—Address, 443, Office of "The Builder."

TO BUILDERS, CONTRACTORS, AND OTHERS.

WANTED, by a thoroughly practical Man, a RE-ENGAGEMENT as SHOP or GENERAL FOREMAN, or CLERK of WORKS. Carpenter and Joiner by trade. Fourteen years' good reference from last employer.—Address, 457, Office of "The Builder."

TO CARPENTERS AND JOBBING MASTERS.

WANTED, a JOBBING SHOP by a first-class CARPENTER, &c. Has had twenty years' experience in all branches of jobbing. Is a good fixer. First-rate at accounts, measurement, &c. 7½d. per hour. References and testimonials.—Address, L. F. 49, Shouldham-street, Bryanston-square.

TO DISTRICT SURVEYORS.

WANTED, by a DISTRICT CLERK, a SITUATION as CLERK and COLLECTOR, engaged on a district three days per week.—Address, H. Mr. Gardener, jun, Bruce-road, Bromley, E.

WANTED, by a Married Man, aged 30, a PLACE in a JOBBING SHOP. A building plasterer by trade. Has a thorough knowledge of jobbing brickwork and masonry work. No objection to the country.—Address, A. B. 21, Marlborough-square, Chelsea, S.W.

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The Builder.

VOL. XXX.—No. 1528.

## *Royal Academy Pictures: Reflected Lights.*

WITH due regard to the specialties of this journal, our first duty in reference to the Royal Academy Exhibition is to indicate the nature and value of the architectural contributions. Having discharged our conscience of that office, and quitted that comparatively deserted chamber where no admiring crowds block the way, we are at liberty to take a glance at the more numerous and brilliant productions of the painter's art which constitute the main part of the show, and to form conclusions upon the merits and demerits of certain examples, or philosophise generally upon the whole gathering (spectators included). Indeed by the time these remarks will be printed special description will have become almost superfluous: the public will already have been instructed in the columns of we know not how many literary journals and newspapers, what to admire and what to pass over; and various critics will have written *up* or written *down* their particular friends (as considerations of business or pleasure may have predominated), in that peculiar style of "art-critic" phraseology, which forms one of the chief blessings of life. Perhaps, however, we may not quite uselessly return to the charge from another quarter, and look at some of the characteristics of this year's exhibition, not so much with the view of criticising technicalties, as of considering the matter in regard to the ultimate ends of painting, as a means of expressing emotion, or of ministering to intellectural enjoyment.

In the first place we must record our conviction that the present exhibition is not equal to its two predecessors in general interest. There may be about the same proportion as usual of good painting, but there is a larger amount of uninteresting pictures than we have seen for two or three years past; pictures with which no special fault can be found, but which are simply like any others, and affect us in no possble way that is worth speaking of. We take it also that the constitution of the hanging committee has been peculiar this year, and that somewhat old-fashioned tastes and principles have been in the ascendant. Only thus can we account for the presence on the line of so much respectable mediocrity of the dullest kind, viz., that which belongs rather to the conception than the execution. In this way we must also account for the absence of that special school which for the last two or three years gave so distinctive a character to Room VII., where its productions were usually placed in juxtaposition; the school whereof Mr. A. Moore is the most typical representative, and which, whatever its mistakes may be, includes among its members talent which may justly claim representation.

Taking the art of painting on what (*pace* M. Taine) we still think its highest ground, the utterance of feeling and sentiment through the medium of representation, we can have little hesitation in pronouncing Mr. F. Walker's contribution to be the picture of the year, and congratulate the artist on his entire success in his own peculiar walk of art, which he had abandoned last year with somewhat less happy result. "The Harbour of Refuge" (227) is one of that class of paintings in which the scene represented is subservient to the deep human interest embodied in the figures, and is chiefly valuable as accessory to their sentiment. We are in the central court of an old almshouse; the old-fashioned red-tiled buildings cover the picture as a background, with a quiet evening sky above them; in the centre of the court, around the statue of the "founder," sit a group of old men half conversing, half dozing; along the path on the left (in the foreground) comes an old woman, bowed down with weight of years, leaning on the arm of a young robust girl, who, with the selfishness of a commonplace nature, contents herself with mechanically supporting her companion, and turns her looks and her interest in another direction. These alone would form the elements of a pathetic picture, but the real force of the whole thing is dependent on the figure of the man mowing the grass in the foreground: as a mere piece of drawing we have seen few more successful things than the sway and action of this figure, with the scythe thrown back for the sweep which we expect to hear next moment in the grass; but as a matter of feeling, the introduction of this image of eager, earnest labour, as a contrast to the ebbing life of the aged inmates of the place, is a perfect masterstroke, the eloquence of which will be felt, we think, the more it is studied. Viewing the picture as a mere scene, exception might be taken to the want of decision and knowledge in the details of the building, and to a certain want of atmospheric softness in the sky (though the painter has got rid to a great extent of the disagreeable mannerism of colour which characterised many of his previous landscapes); viewed as a whole, it is a work of which not only the artist, but the English school, may be proud.

Heartily do we welcome back Mr. Mason, another painter who puts mind on his canvas, and whom illness, we believe, has deprived us of for the last two years at the Academy. Some of his mannerism of execution, too, is worn off; but it was a mannerism so pleasant and so suited to the peculiar feeling of his pictures, that we half regret its abatement. In other respects, "The Harvest Moon" (125) bears its authorship on its face completely, and exhibits in its train of figures (particularly in the young man and girl who come last) that peculiar feeling for the sentiment of rustic life with which the painter has been identified. We are not quite satisfied with the attitude or gait of the figure with the scythe and pitcher, who looks a little unsteady on his feet; and the attempt to indicate the sunset sky (behind the spectator) by the red light on the distant cottage-window is not successful, and is not borne out sufficiently by the light in the foreground figures. From this painter to Mr. Leighton is a long step indeed, reminding us forcibly of the almost boundless scope of painting in the expression of various phases of feeling. The best and most individual work Mr. Leighton exhibits this year, "Summer Moon" (202), is one of those subjects which might be termed "classical," but is so, in fact, only in its being so far idealised, in circumstance and costume, as to remove it completely from associations of every-day life, and leave the spectator free to conjure up his own fancies and associations in connexion with it. Two female figures, heavily draped, are half-reclined on a stone seat in a warm and deep slumber, the summer sky, with a few faint stars, seen behind them. The red and purple draperies, with their tone tempered by the moonlight, form a beautiful study of colour. Deep shadows are thrown from them on the side of the stone seat. Simple as its motive is, this is a picture which will well repay study, and is a very fine type of a class of subject demanding not only high executive power, but genuine poetic feeling on the part of the artist. "A Condottiere" (518), a three-quarter length of a dirty-looking ruffian, in a breastplate, painted with much power and realism, is a good illustration of Mr. Leighton's versatility; but in genuine intellectual interest, how far below the work previously mentioned. Of the works of Sir E. Landseer, "Lady Emily Peel and her favourite Dogs" (25) is the favourite with the public. Like the larger painting of "The Lion and the Lamb" (409), it is very slightly finished, but showing, in the treatment of the animals, that facility in giving expression, and defining muscle, almost by a single touch, which only a life's study could give. "The Baptismal Font" (190) is an unhappy mingling of realism with a rather unnecessary and out-of-place symbolism. Mr. Frith, we are glad to say, does not exhibit this year any of the rather sensational pictures of modern life which have made him popular with the less thoughtful portion of the picture-viewing public. His scene from "The Relapse" is as well painted as usual, but not particularly interesting. The two life-size female figures, "The Miniature" and "The Love-letter" (157 and 460) are more to the purpose, in an art point of view.

Mr. Frost's only work of importance is his diploma picture, a "Nymph and Cupid" (126) This is a classical subject, in the usual acceptation of the term,—a beautifully-finished and bright-looking thing, with high colour in the drapery, though somewhat hard. The real defect, however, lies deeper than this, and consists in the work being purely a painting, and nothing more. It is instructive to contrast this with Mr. Leighton's painting, just now mentioned, and note the distinction between this prosaic use of the classical type of figure and drapery, as an end in itself, and its employment merely as a means for the embodiment of a poetic thought. A superficial critic might class the two works together; but there is a wide chasm between them. We notice, *en passant*, Mr. Hennesey's "Summer Eve, Long Island Sound" (179), with the figures reclining in two boats, on a calm reach of water, as suggestive of a comparatively new local interest and colouring, and note "The Return from Flight" of Louis XVI. and family, by Mr. E. M. Ward (182), as an interesting specimen of the work of an artist who has done more to set forth and illustrate modern history than any other of our living painters. The next picture, "An Elopement, A.D. 1790" (183), is one with a marked individuality, in which Mr. Leslie, while charming us with a beautiful representation of early morning light, broken by trees, and reflected in the quiet stream, has given to his scene a further interest by reviving a bit of English life of eighty years ago. The pretty girl who, in a riding-dress of the period, waits on the bank while her lover is ferried across, is a capital figure in pose and expression, and looks very much alarmed at the bold step she is about to take. The number of horizontal lines in the composition is remarkable, and gives a distinctive character to a painting which is both pleasing and original in a high degree; the more so as being a change from the painter's frequent repetition of "the woman in white," who, however, appears in No. 416, this time with the name of "Lucy." Some of Mr. Le Jeune's charming children (195) have "great expecta-

tions" of catching minnows, and we are more interested in their fishing than in the doings of the adult fishing, or rather flirting party, shown us by Mr. Calderon (219); a picture which annoys us rather. It is painted with the artist's usual care and truthfulness (in particular Mr. Calderon can paint a boat better than most people); but why waste his time and talents on this representation of a most common-place aspect of everyday life,—the *dolce far niente* of fops and the teacup jealousies of a couple of silly girls? Look at it which way we will, we cannot see "value received" in such a work. His "Highborn Maiden" (443) is in a higher key, and is a bright and successful piece of painting, but not with an intensity of expression at all accordant to the verse from Shelley's "Skylark," which forms the title. On the whole, this very gifted painter is scarcely seen to advantage this year, unless in his portraits (of which more anon). Mr. V. Prinsep will not win any the more admiration for his figures by giving to them names great in legend and in song; his "Penelope" (225) is simply an excuse for painting a white-draped figure by lamplight; of the character of the noble-minded queen and wife there is not a trace; the figure is not even a lady, which Penelope emphatically was. Mr. Lewis is richer, though less brilliant, than usual in his Oriental colours; in "The Prayer of Faith shall save the Sick" (422), we are shown a group in a porch, the colour design very effectively managed, so as to concentrate the deeper rich secondary tones about the couch of the sick person, in shade, the tone coming round with a *crescendo* to the right, where the white satin dress of the foreground figure, with a flickering light on it through flowers and foliage, actually sparkles: a treatment equally happy on chromatic and æsthetic grounds. His other contribution, the "Lilium Auratum" (465), two Oriental women of different shades of colour, loaded with flowers, is in a totally different scale and manner; hard, precise, and somewhat flatly treated, with great elaboration of detail; the embroidered dress of the principal figure reminds one of Mabuse. In "God's Acre" (247), Mr. Faed has hit on an admirable motive for a picture, three children over an open grave, perplexing their small souls for the first time over the mystery of death; but the execution is not worthy either of the subject or of the artist: it seems to have been hastily composed, if not hastily painted. "Terms to the Besieged" (249) is a fair typical specimen of the work of an artist who can treat no subject without a degree of levity bordering on farce; in certain classes of subjects this quality of Mr. Pettie's appears appropriately in the guise of what is called "humour," but in others it becomes unreasonable merriment. In this picture the thin frightened faces of the "besieged" councillors listening to the "terms," afford a good study of expression; but even here this borders on caricature, while the theatrical figure of the armed man delivering his errand, if a joke, is a very bad one, and if serious, is a piece of sheer vulgarity. In "Waiting for the Procession" (279), we have genuine humour by an artist who is a master of it, and who never oversteps his own line, or becomes facetious unreasonably; in other respects this single contribution by Mr. Marks to the present exhibition is a notable one, exhibiting as much care, study, and finish, as some artists would bestow on half-a dozen pictures of more pretentious subjects: the happy variety of character, attitude, and expression which the painter has succeeded in infusing into a number of figures, all intent on one object, is a triumph in its way, and no less successful is the play and balance of colour in the costumes: as characteristic specimens among the figures we may mention particularly the street boor, with a straw in his mouth, leaning against the rail with philosophic calmness, and the figure of the comely matron in green on the right. Mr. Marks's range of feeling is somewhat narrow; but within that range, and taking the work for what it is, it would, perhaps, be difficult to praise this picture too highly. As a contrast in style and feeling, take Mr. Poole's diploma picture of "Remorse" (309); the artist's well-known and peculiar weird tone of colouring, unlike anything in nature, is well enough suited for allegorical subjects, and this wild-looking seated figure, in a rocky landscape, is more successful (or, shall we say, less unsuccessful?) than such subjects usually are in painting: it would surely have been more effective, more concentrated in expression, had the principal figure been left in solitude; the accessory figure weakens the expression and does not sufficiently explain itself. The latter accusation may be made also against Mr. Orchardson's "Casus Belli," the best of his contributions, but unsatisfactory in colour and in the peculiarly awkward pose of some of the figures. These last are picked out from amid a fearful collection of platitudes in Room IV. We wonder what foreign artists think of the central position assigned to a great canvass representing Lord Martingale and his hounds, presented "in grateful recollection of the efficient and sportsmanlike manner in which for thirteen years he hunted the county at his own expense." Is English art or the English social ideal most jeopardised in estimation by such an exhibition? One involuntarily recals "Sartor Resartus," and the notable Latin epitaph on the gentleman who had heroically slaughtered "*quinquies mille perdrices*." Mr. Erskine Nicol's dirty Irishman "bothered" (356) reminds us that we passed over a better one, "His Ba'bees" (11), a shrewd Scotchman counting his gains in his pocket with an expression of sly self-glorification which we defy any one possessed of a sense of humour to contemplate with an unmoved countenance. Mr. Armitage's "Dream of Fair Women," a design for a frieze (363), is a type of a class of design to which some of our ablest artists have given their abilities a good deal of late, in the flat somewhat conventional style of treatment and composition which the conditions of mural decoration demand. This branch of painting, shorn as it is of the accessory aids of chiaroscuro and relief, demands in the treatment and character of the outline no ordinary power and individuality on the part of the painter, if the work is to be raised above the level of mediocrity. The general tendency is the contrary of this, and we are in some danger of having fostered and admitted among us a common-place style of art in which almost any figure may be accepted provided it is treated in the conventional manner required. The intention of Mr. Armitage is evidently to define and discriminate character strongly in these figures of women of the Old Testament (partly suggested, we suppose, by Tennyson's poem based on Chaucer's idea), but we cannot say that his figures have life and individuality enough to raise them much above the ordinary properties of wall decoration, except in the superior drawing; and the "Eve" is, we must fairly say it, a wretched conception, a common-place, thin, long-bodied, nude study, without a single sign of the dignity and grandeur of character which ought to belong to the "mother of all living." With all his technical power, there is about this artist a lack of imagination and poetic conception, a deficiency which reduces a work of this sort to the level of a mere Academic study; the same remark would have applied equally to his "Hero" exhibited in 1869, which, though a grand painting technically, fairly robbed the old legend of all its poetic aspect. We notice in passing the "Lament of Ariadne," by Mr. Richmond (498), just to remark that of all classes of paintings by clever men none are less satisfactory than those which are palpable imitations of the style and mode of conception of another artist, more particularly when the imitation is not successful. Mr. Richmond has been trying for some years past to emulate Mr. Leighton, and he will make nothing of it, not necessarily because his genius is inferior (a point on which we will leave those who have looked to judge for themselves), but because Mr. Leighton's, like all real genius, is an individuality, and cannot be adopted, or adapted, by another mind. Then we come to one of the largest and most important works of the year, in view of the labour and talent displayed. By his small "Andromeda" in 1870 (in the International Exhibition last year) Mr. Poynter attracted all who have the faculty of appreciating fine poetic conception and successful execution; is his present far larger work any improvement on this? We have here not only Andromeda (a remarkably fine study of a figure in all the agony of fear and suspense), but Perseus and the sea-monster also, and the townsfolk in the distance looking on to see, as a Yankee would put it, "which will be uppermost." Here comes the tug of war, in a double sense; for the danger is that in reducing so extravagant a legend to actual shape and colour, the poetic faith of the spectator will be rudely shaken, and, the glamour of legend being removed, the details will appear in his eyes merely as ludicrously impossible, and the dragon become, like Caliban, "but a lost monster." In saying that Mr. Poynter has not overcome this difficulty, we will add that we believe no painter could overcome it. His dragon is not commonplace, and the possibilities of anatomical structure have been cared for, but, after all, what is the good of him? He does not frighten us a bit, although he looks a formidable foe indeed for Perseus, who is really a sort of young gladiator, and who might as well poke a penknife into the beast as the sword which he is thrusting into its mouth. We are sorry to say this part of the picture gives us a disposition to laugh, not at Mr. Poynter certainly, but at the dilemma in which his choice of a subject has placed him. The moral is, that modern painters had better eschew hobgoblin pictures—the age is too matter-of-fact for them.

We have more comments to offer, as touching landscape and portrait art, in another number.

## FANCY PRICES.

THE prices obtained at the sale of the late Mr. Gillott's collection of drawings and paintings have astonished most persons. In six days the collection realised some 170,000*l.* under the hammer. From 3,000*l.* to 4,000*l.* each have been given for small pictures by David Cox, Müller, and Turner. At the last day's sale a water-colour drawing by the latter, called "Bamborough Castle," brought 3,150 guineas,—an astounding price. In some cases pictures for which Mr. Gillott gave tens brought thousands; the Müller, for example, which was knocked down at 3,950*l.*, was purchased by Mr. Gillott for 70*l.* The remarkable letter we published in our last showed that for the view of Bamborough Castle, knocked down as already mentioned, Turner received from our correspondent 100 guineas. Another drawing, for which he had paid Turner 70*l.*, was sold for 1,210 guineas, though now much faded. The whole history of the collection would be interesting if it could be learnt. Some people assert that through the cleverness of the owner it scarcely cost him anything. A local paper says that, on one occasion, Mr. Gillott, after looking at a work by Danby, asked the price. "One hundred pounds," was the answer. "I will take a dozen," said the pen-maker, and he got them. Whether this be true or not, we know he often bought two or three works by a rising artist, and after a little while, retaining the best one, could sell the others for what the whole had co[illegible]

The money spent on pictures just [illegible]w is enormous. The Messrs. Agnew, of Man[illegible]ster, purchased, on the first two days of the Gillott sale, to the extent of 30,000*l.*; and it was currently asserted in the room a few days later that they resold the whole within forty-eight hours afterwards.

Amongst the subjects for consideration which this sale suggests is the amount of remuneration received by auctioneers. The ordinary charge of the eminent firm who handed these works from one person to another would be, we are told, 7½ per cent. To avoid the chance of exaggeration, however, let us put it at 5 per cent., the charge an architect of the highest eminence can make for designing, minutely setting forth, and afterwards superintending the production of a building. Between the early training required, the natural ability, the actual labour, and the amount of responsibility in the two cases no comparison can be made; and yet the charge is the same, if not much greater, on the part of the auctioneer. Calling the total 170,000*l.* (common report makes it 10,000*l.* more), 5 per cent. amounts to the sum of 8,500*l.* The charge is made not on account of any special knowledge,—the firm in question does not pretend to assure buyers of the genuineness of the articles put up for sale: it is not at all an uncommon thing for a copy to be sold in King-street as an original: the buyer must take care of himself. The charge then mainly represents probity, connexion, and facilities for bringing buyers and sellers together, things well worth paying for in reason, and we see in the comparison a striking instance of the different scale on which producers and distributors are paid.

We need scarcely say that we are finding no fault with the firm of auctioneers alluded to: the largeness of this particular transaction gives force to the observation, but the observation itself applies to the charges of auctioneers in general, and the system that prevails. The authorised charges of agents in general for letting or selling houses and estates are also excessive, and call for revision. One result is, that as the work can be done after a fashion with very slight training, any one who can find nothing else to do opens an office, or half an office, for agency, and the properly-educated men in

the profession are shouldered and elbowed on all sides, and confounded with a cloud of persons of very inferior *status* and calibre. Thus the largeness of the charges made has brought a punishment. The proper consideration, however, of this part of the subject would lead us too far away just now. The whole army of distributors, intermediaries, agents, and middle-men generally will have a rude shake one of these days.

## SOCIETY OF PAINTERS IN WATER COLOURS.

THE sixty-eighth exhibition of this society is fairly up to the usual mark. There are, in fact, few drawings on the walls that are not worth looking at, and a large number that are worth study; the only drawback being, with some of the older members, a degree of sameness of style which renders one year's works scarcely distinguishable in character from those of two or three previous exhibitions. This applies, for instance, to the drawings of Mr. Richardson and Mr. Duncan, who cannot certainly in any bad sense be called mannerists, but whose excellencies are so uniform in character that we might be excused for wishing a little variety, even if it were gained at the expense of a deficiency in that finished and rounded execution which marks their works. The above-named veteran artists, together with others who work in a uniform manner, Messrs. Callow, Birket Foster, Collingwood Smith, and others, maintain their position; Mr. Cox, jun., makes a good show, and Sir John Gilbert is as recognisable as usual; even, we are sorry to say, in his singularly unfortunate attempt to portray *Malvolio* (237), where he has turned the pompous steward into the likeness of a sneaking dependant. Among artists who have their speciality in looking at and transcribing nature, Mr. A. Goodwin demands attention, especially for his "Abingdon Churchyard—Old Men going to Prayers" (15), a quiet scene, clothed in a peculiar mist of sunlight, and with a distinctive feeling of no common order; "Weed Burning" (50) is another original little drawing, the subject consisting merely of a barren field with the smoke from the burning heaps drifting across the picture, and a very faint indication of distance; yet this is a most suggestive drawing: or [illegible] two others by the same artist will equally repay attention. Mr. A. W. Hunt shows his usual ability and individuality, though we are inclined to question the tone of the water in "Streatley on the Thames" (31), a somewhat unhealthy-looking blue. The brothers G. A. and A. D. Fripp contribute exceedingly well this year; the former showing in "Corri Etichan" (18) and "The Thames at Hardwicke" (48), complete success in two very different classes of subject; the latter also giving evidence of versatility in a charming figure-subject in his well-known style, "The coming Storm" (220), and in a landscape, the first drawing of the kind, we believe, that he has exhibited, "Corfe Castle, from Poole Harbour," a beautiful bit of calm water, and distant landscape. Mr. Branwhite's "Post Haste," looks like a man galloping after a rainbow: a certain whimsicality rather mars a fine drawing. The new member, Mr. Clarence Whaite, sends drawings which fully justify his election; among others an architectural subject, "The Basilica of Constantine, Rome" (105), treated with much power and brilliancy, a warm glow suffusing the yellow stonework, with nearly pure blue in the shadows in the deeply-coffered arches. Mr. Hale is a very large contributor, the best and most original of his drawings being that of a huge rock rising up from sloping meadow-land, with the title of "A Giant asleep" (109), the sun behind sending rays of light over the peak. The same artist's other drawings are larger and more ambitious, but less successful on the whole than this. "Twilight after Rain" (156) is a fine drawing. At one end of the room is one of the finest water-colour sea-pieces we have seen, by Mr. Powell,—"A Channel Tug making up to a Dismasted Ship" (177). The vessels are small, the real picture being the sea, which has been the subject of much and careful study. The continued appearance of weight and transparency in the water could hardly be better given; the smoke of the steamer, blown *downwards* from the funnel in a cloud to leeward, adds much to the windy effect of the whole. Can there be poetry or interest in the back yard of an old inn? Mr. Boyce thinks so, and gives us the "Bull Inn Yard, Ludlow" (94); that is, a bit of the yard, and the roofs of some outbuildings, diversified by a pigeon or two; there is also an "Old Shropshire Farmhouse" (78), with its heavy brick chimneys, painted to the life: it is difficult to know whether to be discontented with an artist for spending his powers on such meagre subjects, or to admire the talent which can enable him to invest them with an interest of their own. There is another little bit, "A Street Corner in Ludlow," consisting really of nothing but a high stone wall and a brick house, which is quite perfect in its way.

Figure pictures seldom form the staple excellence of a water-colour exhibition, the material, in fact, lending itself in general so much better to the requirements of landscape art; and the exhibitions of the Society are the less likely to prove exceptions to this rule, since the secession (to be regetted, from whatever motive) of so original an artist as Mr. Burne Jones. Mr. Topham's drawings, always well executed, lack intensity of interest; not to speak of a certain want of refinement. "Preparing for the Fight" (21) is the one likely to be most looked at. Carl Haag's large and (of course) finely-executed drawing, "Filial Love" (68), is very like a "Bible picture,"—of the kind prevalent a generation or two back,—in general motive and feeling, we mean. It is impossible to feel much interested in such a work. Mr. Walter Goodall's "Venetian Fruit Boat" (62) is a very good work, clear and precise in execution, without the prominent exhibition of labour, though it is a very carefully executed drawing. Mr. Pinwell is, of course, highly finished and original, in his own peculiar style, in "Gilbert à Becket's Troth" (127), but he is an artist seeking too much after peculiarity and piquancy in manner and choice of subject. In both respects, the present drawing, talented as it undoubtedly is, really is too *outré* to give pleasure. Perhaps the most original of the figure subjects is that of the "Rival Florists" (192), by Mr. E. K. Johnson; two old flower-fanciers seated on the lawn before a country-house in eager dispute as to some horticultural point; some females seated at the door of the house slily regarding the controversy. The colour composition, though somewhat low and cold, is very harmonious, and anything but commonplace; the faces have been finished with great care. We should be glad, however, in future exhibitions, to meet with some works showing stronger feeling, more appreciation of the poetic side of life, among the drawings in which figures form the principal subject.

## THE WORKS AT ST. PAUL'S CATHEDRAL.

THE election of Mr. Burges by the committee, to act jointly and upon equal terms with the surveyor to the fabric, Mr. Penrose, has been already mentioned in these pages. It was not stated, however, that previously to the election the question was debated in this shape, namely, whether a "Mediæval" or a "Classical" architect should be elected for the post; and, after long discussion, the question was resolved in favour of Mediævalism by the votes of the members of the committee present, given as follows:—

| *Mediævalists.* | *Anti-Mediævalists.* |
|---|---|
| The Dean of St. Paul's | The Lord Mayor |
| Canon Gregory | Sir W. Tite, M.P. |
| Canon Liddon | Mr. Walter, M.P. |
| The Succentor of St. Paul's | Mr. G. Cavendish Bentinck, M.P. |
| The Rev. B. Webb | Mr. John Murray |
| The Rev. R. St. J. Tyrwhitt | Mr. E. Oldfield |
| Mr. Beresford Hope, M.P. | Mr. Butterworth |
| Mr. Gambier Parry | Mr. W. Longman. |
| Mr. Cazenove. | |

Nine to eight. This was done, be it remembered, with reference to St. Paul's Cathedral! and serves to show the unfitness of the committee as a body for the nationally important work in hand. If the question had been between the election of Mr. Burges and Mr. Somebodyelse, the vote would be perfectly understandable and probably quite right, notwithstanding the feeling of contempt for Wren's works which Mr. Burges has publicly expressed. But, stated as it was, it is positively beyond excuse. The mere fact that such a question was seriously put and debated should of itself lead the subscribers immediately to call upon the committee to resign. The composition of the body is entirely wrong. It should consist of painters, sculptors, and architects, with a certain number of laymen, as representing the general public. Amongst those who voted there is not a single painter or sculptor!

Mr. Fergusson, who is a member of the committee, but returned too late to take part in the discussion, would have voted with the minority had he been present.

We are informed by a letter signed, Sills Jno. Gibbons (Lord Mayor), William Tite, James Fergusson, G. Cavendish Bentinck, John Murray, that, "considering that as regards Mediævalism the voices of the committee were, in fact, equally divided; considering that Mr. Burges has limited his study and practice exclusively to Mediæval works, and has not scrupled to express openly his contempt for the architectural works of Sir Christopher Wren (having, by his own admission, styled such works 'abominations'), certain members of the executive committee have resolved to call a general meeting of the subscribers to the fund, in order that they may have an opportunity of expressing their opinion on the course to be pursued under the circumstances."

Since the above was written, the Dean has denied in the *Times* that the question between a "Mediæval" and a "Classical" architect for the work was debated: it must be obvious, however, that a certain number of the committee viewed the discussion in that light, or they would not have asserted it in public.

We willingly insert a letter addressed by Mr. Burges to the Dean with reference to his expressed opinion on the works of Wren:—

"With reference to my appointment at St. Paul's, may I be allowed to observe that any opinion I may have expressed in public upon the comparative merits of styles had reference to our present and future architecture, but not to the preservation and completion of the works of past ages?

Thus, I have been employed in the completion of the chapel of Worcester College, Oxford, by decorating it in the cinque-cento style, and I may also observe that I have studied coloured decoration in Italy and Classic architecture at Athens.

As an artist I quite appreciate the privilege of being consulted as to the completion of the cathedral of London; and, whatever opinion I may hold respecting his details, I have never been so blind as to deny Sir Christopher Wren his just position as one of the greatest of our architects."

What has the Royal Academy done with reference to this national work? We should be glad to hear that the council had appointed a committee to consider the matter, and report upon it. If would not be more than the public has a right to expect from them.

## THE PRESERVATION OF NATIONAL MONUMENTS.

IN continuation of observations we have already printed, Mr. Young writes,—I find from a valuable communication of Mr. Kinahan in 1869, that the most interesting early buildings on the Connemara Islands are rapidly perishing. Of Ardullain, he says, "The ruins are all shattered and broken; tradition says they were in good keeping when The Martin held the wilds of Connemara. His successors look more to what can be taken out of the country than what is in it." "One cross only is in a good state of preservation—all the others and any carved stones are more or less injured." Of Innis Boffin he says, "The ancient buildings are all but swept from the face of creation, only a fragment of St. Colman's Abbey remains of all the buildings this island once possessed."

To turn to earlier and ruder monuments than these, we find that everywhere the earthen forts, raths, and megaliths are being swept away rapidly. The great series of cromlechs at Carronmore on Knocknareagh Mountain, in Sligo, associated as they are in such an interesting way with the writings of Beranger in 1791, and Dr. Petrie in 1837, are being destroyed wholesale. Oh for an Irish Lubbock to step forward and save them! Curiously enough, the French authorities do not seem to recognise these objects (at least everywhere) as of sufficient value to protect them, for we now hear that in Brittany and Finisterre, and especially at Carnac, a great many are being destroyed. Nor are matters much better nearer home. For the following case I am indebted to a friend who has been in the neighbourhood. I mentioned the risk of being destroyed to which Avebury was exposed, and its now undoubted security, and it may be interesting to record that our Giant's Ring, with its central cromlech—a work only inferior to Avebury in importance, had even a narrower escape some twenty years ago.

The late Dr. Drew having paid a visit to Ballylesson, was taken to the top of the church tower for the fine prospect which it commands on every side. Being pointed out the Giant's Ring at Drumbo, to his amazement and horror, he beheld men busily digging into the mound, and removing the materials to another place. He hurried into town, and wrote a strong-worded

letter to the *Ulster Times*, a copy of which was sent to Lord Dungannon, the owner of the soil. His lordship instantly directed that the circle should be inclosed with a proper stone wall, and no further interference with it permitted: and this came not a day too soon, for it then transpired that the levelling of the earthen mound or ring was only a portion of the *improvement* which the tenant had contemplated on the premises. He had entered into a bargain with a local road contractor, to bore, and blast with gunpowder, and then break into road metalling, the huge trap boulders composing the cromlech, commonly called the Druid's Altar.

But sad as was the want of taste and feeling for antiquity at Drumbo, a more melancholy and deplorable case of this kind happened at the famous Con O'Neill's castle at Castleneagh. The owner (I believe the grandfather of the present Marquis of Downshire), hearing the old castle was much dilapidated, wrote to his agent to inclose the castle field with a wall. His orders were obeyed, but imagine his vexation and anger (for he had a strong desire to protect the old ruin) when he found, on visiting the spot that every stone of the old pile had been removed and used in erecting the wall, for which piece of economy his agent expected much commendation.

It would be unjust not to admit that there has come about a greatly improved state of feeling on these matters within the last thirty years, and specially is this true of the more cultured classes in England, although it is not confined to them. In Ireland, considering that only one association has been doing any active service during the last twelve years or so, it is much to their credit the large amount of valuable work they have effected with such limited means. I refer to the late Kilkenny—but now the Royal Historical and Archæological Association of Ireland—and may mention the following buildings of great interest, which, chiefly through the exertions of the zealous secretary (Mr. Graves), aided by members of the association, have been, by judicious repairs, placed in a state of security; viz.:—The Abbey Church of St. Francis, in the town of Kilkenny; the Round Tower of Clonmacnoise; the churches, crosses, and Round Tower at Monasterboice; and it is also proposed to effect similar repairs, as far as can now be done, to the remains of the seven churches at Glendalough, county Wicklow. But, making due allowance for improved public feeling, and for all that these private associations can overtake, it is painfully evident that there are at present no adequate means of dealing with the whole question of national monuments and their due preservation, such as the urgency of the case demands.

The first tangible recognition of the duty of the State in this matter is contained in the 25th section of the Irish Church Act of 26th of July, 1869. It provides "that where any church or ecclesiastical building or structure appears to the commissioners to be ruinous, or, if a church, to be wholly disused as a place of public worship, and not suitable for restoration as a place of public worship, and yet to be deserving to be retained as a *national monument* by reason of its *architectural character* or *antiquity*, the commissioners shall, by order, vest such church, building, or structure in the secretary of the Commissioners of Public Works in Ireland, to be preserved as a national monument."

The Act is manifestly incomplete, in not providing for a properly-qualified inspector being appointed, who would examine and report upon the buildings that should be considered national monuments. Perhaps it is as well that nothing has yet been done under this 25th section of the Irish Church Act, as Sir John Lubbock has given notice that he will introduce a Bill this session for the Preservation of National Monuments, both in Great Britain and Ireland; and I trust this 25th sec. may be repealed, and all the buildings worthy of being cared for placed under the one control.

From a draft of the Bill which has been kindly sent me by its author, I find a very simple machinery is proposed to be set up, resembling pretty closely the method pursued in France. Commissioners are to be appointed, who are to be vested with all the powers necessary to carry out the objects of the Act. Inspectors to be appointed by them, who will be charged with the duty of making out the lists of monuments worthy of coming under the operation of the commission. Provision made for compensating all owners whose private rights may be interfered with.

## THE LATE PROFESSOR WESTMACOTT.

By the death of the late Professor of Sculpture in the Royal Academy we have lost an esteemed friend and valued contributor. Richard Westmacott, son of Sir Richard Westmacott, R.A., was born in London in 1799. His desire was to be brought up to the Bar, and it was only in accordance with Sir Richard's earnest wish that he became a sculptor. He studied under his father, and in 1820 proceeded to Italy, where he remained six years diligently occupied in examining the remains of Greek and Roman art, and investigating their history. The works of Mr. Westmacott are in many respects not unlike those of his father; graceful and tender in conception, with something of classic severity in the style, and never-failing purity of feeling,—but his genius was of a graver character, and he excelled in monumental and devotional subjects, and in fancies of a thoughtful and reflective cast. He was especially happy in the treatment of *relievi*. Among his classical and academic works may be noticed his *relievi* of "Venus and Asconius," and "Venus instructing Cupid," executed for the Earl of Ellesmere; a seated statue of the "Cymbal Player," the property of the Duke of Devonshire; "Venus carrying Cupid;" the statue of "Ariel;" "Paolo and Francesco," an admirable bas-relief executed for the Marquis of Lansdowne. More original in style are his fantasies the "Bluebell," and the "Butterfly," two bas-reliefs executed for the Earl of Ellesmere (1836–38). As examples of his monumental works, we may instance his recumbent figure of the Archbishop of Canterbury in Canterbury Cathedral, and that of Earl Hardwicke at Wimpole; and the Ashburton monument, especially the grand figure of the "Angel Watching." Of his religious works we may mention the statue of "David as the Slayer of Goliath," "Prayer and Resignation," and the bas-relief of "Go and sin no more." Of late years Mr. Westmacott had been chiefly occupied on the execution of monumental and portrait sculpture. He produced busts of Sir F. Burdett, Sydney Smith, Sir R. Murchison, Lord John Russell, and other celebrated personages; but he was, perhaps, most successful in female busts. The group in the pediment of the Royal Exchange is from his chisel. Mr. Westmacott was also distinguished for his literary attainments. He has contributed several valuable papers to various serial publications; among others, the articles "Sculpture" to the "English Cyclopædia," and the "Encyclopædia Metropolitana," as also to the *Builder*, and he had delivered courses of lectures on the principles of sculpture at the Royal and London institutions. He also wrote one or two farces for the stage. He was elected F.R.S. in 1837; A.R.A. in 1838; R.A. in 1849; and succeeded his father as Professor of Sculpture in July, 1857. Mr. Westmacott died on the 19th ult., at his residence, 1, Kensington-gate, Hyde Park, after three days' illness, aged 73.

About a year before his death an accidental fall rendered his right hand useless: it was characteristic of his energy that he applied himself vigorously to make his left hand supply its place, especially in writing, and succeeded well.

## THE BETHNAL GREEN MUSEUM.

It appears from a statement made last week by Sir Antonio Brady, at a meeting of the Whitechapel Literary and Scientific Society, that it is probable the new museum, which has been for some time in course of erection, in Bethnal Green-square, will be opened in the course of a few weeks. Sir Antonio Brady, who, along with the Vicar of Bethnal-green, and some other gentlemen, purchased, as our readers know, Bethnal Green-square, and gave one half of it to the Government, on the understanding that they would erect and maintain a museum upon it in connexion with that at South Kensington, complains very bitterly of the many difficulties which Mr. Lowe has interposed in carrying out the intention on which the East London Museum was granted by the Committee of Council on Education. He states that he holds the Chancellor of the Exchequer solely responsible for the delay in completing the building (which has now been in progress about four years), although to some extent he has been successful in battling with him, and he is now "sanguine enough to express a belief that within a month the building will be opened," and that her Majesty may be induced to take a part in the opening ceremony. Sir Antonio has also another ground of complaint against the Government as repects the utilisation of the museum, in regard to which he imputes to them a breach of faith. He states that they have only granted 2,000*l.* for the maintenance of the museum during the first year, which is barely sufficient to pay for the gas. He further states that he has reasons to believe that it is intended to open the museum only one week-day evening, and he expresses his determination to oppose this arrangement by mandamus, if necessary, as a breach of the agreement by which he, as one of the trustees of the land, transferred it to the Government.

The museum, which is built of red brick, in three spans or bays, is 190 ft. in length by 150 ft. in width; but the entire extent of the grounds is about 330 ft. by 190 ft., covering an area of 6,930 square yards, or something like an acre and a half, which is enclosed by iron railing, furnished by the Metropolitan Board of Works, and which, until recently, formed a portion of the railings of Hyde Park. At each side of the building there are thirteen windows, above which are mosaics, uniform with the frieze at the Albert Hall, and representing the several branches of industry, in manufactures and agriculture, together with the arts and sciences, as well as sculpture, astronomy, chemistry, music, and other studies. Running parallel with the west part of the building is a porch, composed of brick, glass, and iron, and this will be the principal entrance into the museum. It is intended to have the grounds around the building ornamentally laid out and planted, and amongst other objects of attraction will be the majolica fountain, which was one of the most prominent features of 1862. This specimen of art, which has been transferred from the Horticultural Gardens, is now in course of reconstruction, in front of the museum, opposite to the vestibule.

The main approach, through the western entrance, leads into the central hall, which commands almost a complete view of the whole of the interior of the building. The floor of the central hall is paved with black and white marble tiles, in squares of about 1 ft. each. Eventually it is intended to place sculpture and other works of art around each side of the hall, which is very spacious. The different bays in the interior are respectively set apart for distinct specimens, in the various departments, and everything may now be said to be in its place ready for the opening, the arrangements in this respect having been completed about a fortnight ago, with the exception of the hanging of the pictures, which are more than 600 in number, mainly contributed by Sir Richard Wallace, and which is a remarkably fine collection. Sir Richard Wallace also contributes a considerable quantity of sculpture, bronzes, Sèvres china, and other rare and valuable articles, and the whole of the pictures and the last-named specimens have been conveyed to the museum, and are now being hung and arranged in the galleries solely at his expense.

The south bay of the building is devoted to the exhibition of animal products, which has for some time been stored up at South Kensington, but which has not hitherto been exhibited in consequence of want of space. The north bay also contains specimens from South Kensington, consisting of a good collection, whilst at the east end is displayed the "Museum of Economic Entomology," formed by Dr. Andrew Murray, late secretary to the Horticultural Society. The basement of the building is intended to be set apart for refreshment-rooms, apartments for the officials, and other similar purposes; but a portion of the space will be appropriated for sculpture, and also for the establishment of a library and reading-room.

## THE STEPNEY SCHOOL COMPETITION.

At the usual weekly meeting of the London School-Board, on Wednesday last, the design submitted by Mr. T. Roger Smith was selected, and that gentleman was appointed to erect the school, with certain alterations.

With reference to an observation made in our notice last week of the designs for the Johnson-street School, that several of the class-rooms in Messrs. A. & C. Harston's design were approached from the central hall, those gentlemen write to say that they sent a second plan, in which none of the class-rooms are entered from the central hall. This is doubtless true, but it was not of the second plan that we were speaking. Com-

menting on the design of another competitor, they go on to say,—"If it is right that class-rooms should be entered from the central hall, then all the class-rooms should be so entered. If on the contrary it is wrong, let the whole have distinct entrances. We approve of your suggestion that the committee should take evidence upon these points before selection, as either scheme is better than a compromise, which neither combines the boys' and girls' rooms, nor thoroughly divides them, and to effect which all unity in the departments is sacrificed, and supervision rendered impossible."

## ROSS WORKHOUSE COMPETITION.

LAST week the Ross Board of Guardians met to select a design for their proposed new workhouse from five sets sent in competition.

The Chairman said, in reply to some observations made, that he did not think it would be worth while to take into consideration the probable cost of carrying out any of the plans, as such estimates, roughly made, were apt to be very fallacious. The Poor-Law Board would not sanction the adoption of any plan which was not drawn up on the basis of an estimated cost of 34*l.* per head of the inmates. That was the minimum cost sanctioned, and the Poor-Law Board did not like to entertain any proposal which was framed on an estimated cost of less than 40*l.* per head of the inmates. It seemed to him ridiculous in that case for an architect to propose to erect an entirely new building, to accommodate 309 persons, for 7,000*l.* At Monmouth, the estimated cost of the new Union buildings had been 11,000*l.*, whilst the actual outlay amounted to 15,000*l.*, and he thought they should confine their attention to selecting the most suitable plan, without reference to cost. There was also another provision rendered imperative by the Poor-Law Board, namely, that the cost should be sixpence per cubic foot of the entire building.

The merits of the plans were then discussed.

"The set marked 'Idoneum' were framed at an estimated cost of building, according to No. 1 scheme, of 8,200*l.*, and according to No. 2 scheme of 10,800*l.*

The set marked with an 'interlaced triangle' were based upon an estimated cost of building of 7,015*l.*

The set marked 'Convenience' were at the following estimated cost of building:—Scheme A, 9,150*l.*; scheme B, 6,000*l.*"

Ultimately the set marked "Idoneum" was selected, and was found to be by Messrs. Haddon, Brothers, of Hereford and Great Malvern.

The design marked with "Intersected Triangle" was found to be by Messrs. Lawrence & Goodman, of Bristol and Newport, Monmouthshire; and that marked "Convenience," by Mr. E. Power, London, and Mr. George Smith, Ross.

The clerk was instructed to communicate with Messrs. Haddon.

## COMPETITIONS.

*Chester.*—The design of Mr. W. Botterill, of Hull, was selected in a limited competition a short time ago for a Wesleyan chapel to be erected on the City-road. The style adopted is the Geometric, and the design embraces a tower and spire. The contract has just been entered into with Mr. J. Stringer, of Sandbach, for 4,445*l.* 10*s.* The building is to be of Handbridge stone. The accommodation is for 800 persons. The contract does not include the spire, and is also exclusive of lighting and heating.

*New Church at Blundellsands.*—In a limited competition of local architects for this new church, the committee, after consulting with Mr. E. G. Paley, of Lancaster, have accepted the designs prepared by Messrs. Hay.

*Worksop.*—The plans for schools selected in open competition have been approved by the Committee of Council on Education. The design for larger boys' school is by Mr. J. F. Sinclair, of Worksop; the smaller boys' school by Mr. H. Lovegrove, of Buckingham-street, Strand, London, who is also author of selected design for girls' school.

*Chorley Townhall.*—The Improvement Commissioners held a special general meeting on Monday evening, to receive the report of Mr. Paley, architect, Lancaster, as to the persons entitled to the premiums of 80*l.*, 30*l.*, and 20*l.* for the first, second, and third best designs for the new townhall. The clerk read Mr. Paley's report, which stated that 10,000*l.* (the sum fixed by the commissioners), was quite insufficient to cover an area of more than 1,500 yards with substantial and well-constructed buildings, such as the commissioners might be expected to erect for the town of Chorley. In selecting the three best plans, Mr. Paley had therefore not taken cost into consideration, but carefully kept in view that the award should be given not to the finest architectural design and composition, but to the plan that shows the best appropriation of the ground, combined with the most suitable elevation; in fact, the competitors who have best studied the ground, and carried out the instructions. The following designs were selected as the best:—"Cotton," "To be or not to be," "Let Chorley flourish." Set No. 1. It was resolved to award the prizes in accordance with Mr. Paley's report, and the envelopes containing the addresses were opened:—"Cotton" is designed by Messrs. Ladds & Powell, of London; for the second, no address or name could be found; "Let Chorley flourish," is by Mr. J. J. Bradshaw, of Bolton.

## THE BERLIN COMPETITION.

THE Berlin correspondent of the *Telegraph*, after commenting in not very flattering terms on the designs for the proposed German Houses of Parliament, submitted by French, Italian, and German architects, says,—

"The English competitors have not been trammelled, like their German rivals, by an accurate knowledge of Fatherlandish characteristics. The conditions give them *carte blanche*, and they have taken full advantage of the privilege granted. It may be, even, that they have gone to extremes in the way of ornamentation, and rather designed fairy castles or 'mansions in the skies' than sober, business-like Houses of Parliament, destined to be erected in the most matter-of-fact city in the world. But they have erred, for the most part, on the side of beauty,—though there are one or two painfully ugly drawings, I regret to say, bearing English signatures,—which is more than can be said for the majority of their foreign fellows. It may be, however, a subject of legitimate congratulation to British artists to know that incomparably the noblest in conception and most artistically carried out of all the designs exhibited is that of Mr. Wm. Emerson, a London architect, whose 'perspectives' are simply two of the most charming little pictures that have been seen in Berlin for many a day; and I am informed, upon first-rate professional authority, that the internal arrangements of the glorious Gothic building, which so grandly realises the prescription of the official programme in 'embodying the idea of a House of Parliament for Germany in a monumental sense,' are as practically excellent as its elevation is ideally magnificent. Next in attractiveness to Mr. Emerson's Walhalla is a stately pile, surmounted by a lofty dome, that owes its being to the creative genius of Mr. Scott. The third and fourth honours, will, I fancy, be assigned to the designs of a Berlin and of a Hamburg architect; and the fifth prize may possibly fall to the share of another Englishman, whose drawings are hung between those of Mr. Emerson and those of Mr. Scott. The jury, I fancy, would be shrewdly puzzled to select from the remaining ninety-six 'Entwürfe' a sixth design that, if put into stone or bricks and mortar, would be pronounced by the world's verdict to be worthy of the great purpose to which the greatest nation on the continent of Europe has resolved to devote several of the millions it has won in the great game of war."

## CAPPING REDCLIFF SPIRE.

### A BRAVE LADY.

ON the 9th inst., Ascension Day, the capstone and finial were placed on the spire of Redcliff Church, Bristol, in the presence of a vast number of persons gathered below to watch the proceedings. The ceremony was performed by the Mayor, Mr. W. Proctor Baker, and greatly increased interest was excited by the fact that the Mayoress accompanied her husband in the somewhat dangerous journey. Heavy rain, with thunder and lightning at the hour fixed, two o'clock, postponed the event, and would have daunted many. Not so, however, with Mrs. Baker. After the lapse of half an hour the rain ceased, and preparations for the ascent were renewed. The Mayor and Mayoress took their seats in the "lift," raised by a steam engine which has been used during the erection of the spire, accompanied by the clerk of the works. As soon as the hoist began to move, the vast crowd commenced cheering heartily, and the Mayor took off his hat and bowed his acknowledgments. The cheering continued all the time the hoist was slowly rising, and until its occupants were safely landed on the first stage, a height of 160 feet above the level of the hill. From this point to the summit of the spire the usual ascent is by means of ladders, but a special contrivance had been brought into requisition for the occasion. This consisted of a second hoist, worked by hand. It was merely two square boards, one over head and the other under foot, like the top and bottom of a box, with a rope at each corner, covered on three sides with a flag. Into this the Mayoress got, and was hoisted by the workmen to the top of the spire. Men were stationed at different points to prevent it swinging too much. Nevertheless, it did swing, and that sufficiently to make those below nervous. His Worship showed his pluck by mounting the ladders, and he was not long in reaching the top. The next party hoisted up were the vicar of the parish, the Rev. Canon Randall, with his churchwardens, Messrs. C. B. Hare and Mervyn King. In the third hoist were the Rev. F. Auchmuty, one of the curates, and Mr. Edmund King. The whole party having been deposited at the top, the signal was given to raise the capstone, which had been placed in position early in the morning; and Mr. Baker assisted by the Mayoress, at once commenced to lay the mortar with a silver trowel. This done, the stone was carefully lowered, and the Mayor laid it in its place, in the name of the Father, Son, and Holy Ghost. The little group then gave a hearty cheer, and the men waved their hats. The people below caught the sound, and took it up, and a hearty and prolonged cheer announced the completion of the interesting ceremony.

A few words of congratulation and thanks were said by the Vicar, who remarked that the present proceedings were merely preparatory to those of the Cannynge Society's anniversary, fixed for the 28th of this month. The conclusion of the ceremony was the signal for the bells in the tower to ring out, and while the party descended joyous peals were given forth. When the Mayor and Mayoress reached the ground they received the deserved congratulations of a large body of friends.

The spire is octagonal in shape, with panelled bands at intervals, and ball-flowers up all the angles, and from the summit of the tower to the top of the vane, not yet fixed, will be above 180 ft. in height, while the tower itself is about 110 ft. high, making a total of nearly 300 ft. It is built of Dundry stone, but the capstone is of Portland stone. This stone weighs about a ton, and is 13 ft. in girth, and 2 ft. in thickness; it is very fully moulded, mitred to meet all the angles of the spire, and a very excellent piece of masonry.

The work has been done from the designs and under the superintendence of Mr. Godwin (the conductor of this journal), by Mr. William Rice, the resident clerk of the works, and the men under his direction. The vane has been made by Messrs. Hart & Co., and is now ready for fixing.

## PROPOSED SEWAGE-FARM AT WALTON-ON-THE-HILL.

THE internal sewerage of the township of Walton having been completed, according to plans of Messrs. Reade & Goodison, civil engineers, of Liverpool, the local Board instructed them to select suitable land for a farm upon which the utilisation of the sewage as originally provided for could be carried out.

The land selected lies in the valley of the river Alt, about two miles below the present outfall into Fazakerley Brook. It contains 104 acres which, with the present population, gives about an acre of land for every sixty inhabitants. The whole area can be commanded by gravitation from the present subsidence tanks, and it is proposed to construct a storage reservoir on the farm sufficiently large to contain twenty-four hours' supply of dry weather sewage. The sewage is to be conveyed by a sewer 2 ft. diameter, at an inclination of 1 in 1760, and thence from its termination by an 18 in. diameter cast-iron pipe taken under the Alt, in the form of a syphon, and discharging into the storage reservoir. The estimated cost, including sewer, distribution, land, tenants' compensation, &c., is 26,600*l.*

On May 3rd, an inquiry was held at the Black Horse Inn, Walton, by Mr. Robert Morgan, the Government inspector, with reference to the proposed compulsory purchase of the land selected for the farm. Mr. Gulley appeared for the Board, and Mr. Potter, for Lord Sefton, the owner of the land, who opposed the granting of the application.

Messrs. Reade & Goodison, in evidence, stated that they were well acquainted with, and had frequently examined, all the land in the valley of the river Alt available for sewage purposes, including that in the scheme brought forward by Lord Sefton, and were of opinion that the land selected was, as regards soil, subsoil, and levels, the best attainable, and admirably fitted for the purposes of a sewage farm. That the subsoil being mostly a sharp clean sand, free from pebbles, and lying upon the boulder clay, with a maximum depth of from 12 ft. to 15 ft., would give ample opportunities for efficient under-

drainage. They estimated the cost of distribution, and laying out the land as a sewage farm, at 20*l.* per acre, and considered that 160*l.* per acre would cover the cost of the land, including all compensations and expenses. The whole could be commanded by gravitation from the storage reservoir.

Mr. M. O. Tarbotton, borough engineer, of Nottingham, gave corroborative evidence.

On behalf of Lord Sefton, Mr. A. Orridge, the surveyor to the West Derby local Board, produced a counter scheme for the utilisation of the sewage of Walton, on a portion of the Fazakerley Hall estate, and Mr. Hope supported his views, and condemned the Walton Board's scheme.

## CO-OPERATIVE BUILDING SOCIETY AT BARROW.

THE new town and port of Barrow-in-Furness, which has so rapidly grown, and the population of which is constantly increasing, has on more than one occasion been noticed in the columns of the *Builder*. The very great demand for house accommodation on the part of the daily influx of new residents brought to Barrow by the new works which give employment to such a large number of artizans, has led to the establishment of a co-operative building society on a rather novel scale. The society, which has been named the "Barrow Co-operative Building, Investment, and Land Society," has for its objects the buying and selling land, the erection of dwelling-houses and other buildings, the buying and selling of property, and the lending of money to members on the security of real and personal property, and already a large number of shares have been taken. The society includes in its operations the purchasing of houses which members may desire, by paying according to the cost.

## THE NEW PUBLIC ROOMS, TUNBRIDGE WELLS.

THIS building has been opened. It is in the Byzantine style of architecture, from the designs of Messrs. Wilson & Wilcox, architects, Bath, the builders being Messrs. Willicombe & Oakley, of Tunbridge Wells, and the cost amounted to something like 11,000*l.* It is composed of two wings, with large hall at the back, and the material used in building is white brick, with Bath stone dressings. The approach at the front is by a vestibule, 12 ft. wide. The wings have Mansard roofs, with ornamental iron railing round the top, and with dormer windows. The wings are built suitable for other purposes than the public rooms, and have private entrances at the sides. The rooms upstairs are approached by a staircase, with large horizontal light over, connected with the club-room, the reading-room, and the library over the vestibule. On the ground-floor there are eight windows in addition to those in the wings, and each wing consists of five floors with three windows on each floor. The circular-headed windows are separated by pilasters with carved caps and key stones, and ornamented with moulded bosses. The extreme length of the building is 114 ft. from outside wing to outside wing, and the extreme depth of the frontage of the wings to the back room is 109 ft. The great hall is 100 ft. long, 42 ft. wide, and 35 ft. high. It contains a movable platform with orchestra, the platform being divided into three compartments. It is therefore of some width (about 22 ft.), and a depth of 40 ft. The ceiling is divided into thirty-six panels, each of which is decorated, some with large (ventilating) centre flowers and others with flowers to harmonise. The walls are also divided into panels with pilasters—moulded caps carrying the ribs forming the panels. For a height of 9 ft. the walls are decorated with painted drapery. The room is lighted with a large chandelier in the centre, and two smaller ones at the ends, with eight still smaller ones intersected, the large one having 63 jets, the two smaller 90, and the remaining eight 192, making a total of 345. There are three retiring-rooms for professionals, with ladies' and gentlemen's cloak-rooms. The reading-room is 49 ft. long, 34 ft. wide, and 22 ft. high; the billiard-room is 25 ft. long, 18 ft. wide, and 16 ft. high: the club-room is 46 ft. long by 16 ft. wide; and the library 15 ft. long by 16 ft. wide. In front of the main building, and extending the whole length, is a stone balustrading and façade over the *portes cochères*.

## THE NEW USE FOR SOLID DEPOSIT OF SEWAGE.

THE new use to which the solid contents of sewage is being put, for the sake of experiment,—viz., making it into a first-class hydraulic cement,—by General Scott, is thus spoken of by the London correspondent of a Manchester paper, who has seen the process:—

"General Scott, to whom the public is indebted for the erection of the Albert Hall, and much of the arrangements in connexion with the International Exhibition, has made a very remarkable discovery, which is likely to solve the problem of what is to be done with town sewage. His process is to be seen in actual working at Ealing, a town of 10,000 persons, about five miles from London. I have just paid a visit to the works; and a description of them may be interesting. Near the end of the town, a mixture of eight parts of lime and one of clay is thrown into the sewer, and is allowed to run down the sewerage to a piece of land, about half a mile from Ealing. The mixture here passes into a long tank, and, the solid matter having been deposited in the tank, the water passes off almost clear, and free from smell. The deposited sewage looks like mud. It is taken from the tank to a drying place, not unlike those used in a Cornish china-clay works. There it is dried by a flue, is then pugged in a pugging-mill, and then passed through a brick-machine. The bricks are finally placed in a kiln, and calcined; and the result is an hydraulic cement, equal to any Portland cement in the market, and saleable at a considerably lower price. By a little alteration in the precipitating ingredients, other cements may be obtained. The sewage contains such a large quantity of hair, rag, straw, and other combustible substances, that it supplies, to a large extent, its own fuel; and coke and inferior coal may be used in the kiln. But cements are not the only produce which is obtained from the sewage. By treating it with lime, a serviceable manure is obtained. General Scott and his brother (Mr. Thomas W. Scott, late of Plymouth, who is superintending the works) hope to do even more than this. It is well known that the most valuable fertiliser in manure, the ammonia, passes off in the water; and the question is if this can be extracted. As it would be worth 60*l.* a ton, there is clearly room and inducement to experiment. Two of the three Commissioners appointed to inquire into the pollution of rivers,—Dr. Frankland, the chemist; Mr. Morton, the well-known agriculturist (the third Commissioner, Sir William Denison, is dead),—have been to Ealing, and come back highly delighted. Deputations from Leeds and Birmingham have also been greatly struck by the process. It has, of course, been patented, and probably a company will be formed for the purpose of working it, either directly or (more likely) by granting the use of the patent on a royalty."

## THE NEW SHOREDITCH INFIRMARY.

ON a site close to the Shoreditch Workhouse, in Kingsland-road, the local guardians have had erected a new infirmary for the sick poor. The building is connected with the adjoining workhouse, and the frontage faces Hoxton-street. On one side the building is bounded by the parochial relief offices, and on the other by the row of dilapidated cottages called Reeve's-place. The frontage is ornamented by a vestibule, with Corinthian columns, bearing a feeble representation of a Corinthian capital. The portals having been passed, the visitor finds himself in a capacious apartment, surrounded by a skirting of encaustic brick of vermilion hue, and polished like a mirror. Surmounting the skirting stands the interior of the gault brick wall,—that material being perhaps better known as Burham brick, from the fact that it is extensively used in the construction of London sewers.

The cornice of the apartment consists of a variegated belt of encaustic and Burham brick, which gives a sightly appearance to the reception-room, which is upon the ground flat, with a palisading of metallic rails, enclosing the area of the basement story. This entrance-hall, which is about 24 ft. square, leads along a corridor, with consulting rooms on each side, to an apartment fitted up designedly as a receptacle for drugs, surgical instruments, &c. Along the range of the building through which the corridor extends are rooms for the accommodation of the medical superintendent, matron, nurses, and the ordinary staff of auxiliaries. All is arranged upon a methodical and economic scale, devised by Mr. Lee, the architect of the establishment. Messrs. Hill, Keddell, & Waldram were the contractors, at a little over 16,000*l.* A. B.

## SCHOOL BOARDS.

*St. Austell.*—At the meeting of the St. Austell School Board, on Saturday, the 11th inst., the competitive designs of Mr. Sylvanus Trevail, of Par Station, were adopted for the Pentewan and also for the Town or Central Schools. The former is to be a mixed school, to accommodate 100 children. The latter will be the central schools for the St. Austell district, which are to provide accommodation for 500 children, and will comprise boys' and infants' schools, each 60 ft. by 20 ft.; girls' school, 40 ft. 6 in. by 20 ft.; two class-rooms and a board-room, each 20 ft. square; a teachers' residence, containing nine rooms, with all necessary entrances, offices, &c. The designs of Messrs. Dwelly & Sons, of Plymouth were considered to be the next in the order of merit.

*Bridgwater.*—The Bridgwater Board has resolved to apply to the Education Department for the loan of 2,800*l.*, to pay the cost of erecting new schools in the eastern portion of the town. It is in contemplation to erect another set of schools in the western part, to meet the requirements of the department.

*Bradford.*—At a meeting of the Board, a deputation was received from Little Horton and West Bowling, praying the Board to proceed with the erection of Ryan-street school. The memorial was referred to the Statistical Committee. It was agreed that the plans of the following schools should be again presented to the Education Department for approval, and with a request that the department recommend the Public Works Loan Commissioners to advance the necessary funds:—Feversham-street schools, site and buildings to cost 17,982*l.*; Bowling Back-lane school, site and buildings to cost 9,250*l.*: Ryan-street school, site and buildings to cost 11,300*l.* Plans of the following schools were adopted and ordered to be forwarded for the approval of the Education Department, with a request that the Loan Commissioners be requested to advance the necessary funds:—Infant school at Horton Bank Top, the buildings to cost 3,465*l.*; Whetley-lane school, the erection to cost 7,800*l.*; and Lily Croft-lane school, the building to cost 7,760*l.*, and the roads and drains 250*l.*, in addition to the price already paid for the land.

*Ipswich.*—The question of the plans received for schools on the Wherstead-road and Argyll-street sites has been discussed. A suggestion was made that a selection of the best two should be made, and the chairman observed that he thought it would be comparatively simple to reduce the plans to that number. The Board then considered the plans in committee. The designs for the proposed schools on the Wherstead-road and Argyll Estate sites, which have been submitted to the School Board, have been opened to further inspection in the library at the Town-hall.

*Brighton.*—Some discussion took place at last meeting on the recommendation of the General Purposes Committee, "That the Board do issue advertisements inviting architects to send in designs for the new schools to be erected between Sussex-street and Richmond-street, after the contract for the purchase of the site has been signed." Mr. Hack suggested that the Board should make known to the architects their views as to the arrangement of seats in the Board schools; and he also thought it advisable that the seats should have backs, and that not more than two scholars should sit together at a desk. After some discussion the chairman suggested that this and other minor matters should be embodied in a report, and considered at a future time. Mr. Hack moved that, in accordance with the permission already given, and without waiting for the reply to the amended report of the Board, immediate steps should be taken to provide infant schools where most wanted. Mr. Hack said that, according to the original statement, accommodation was needed for 2,000 infants; but the conversion of the Circus-street School would reduce this number by 250, and the new Ivory-place School, when built, another 250. This, however, was only 500 out of 2,000. There was a great deficiency in District No. 2, and he proposed that, if possible, there should be a school in the neighbourhood of the Queen's-road, where there were 400 or 500 small houses and no infant school. He would also propose

that another be placed at the bottom of Gloucester-street or Trafalgar-street. In District No. 3 there was a deficiency of 215, which one school would supply, and it might be placed near the London-road. In District No. 5 there was a very large deficiency (981). This would partly be relieved by the new school in Ivory-place, which abutted on the district, but there was ample room for a school higher up the hill, where the houses are increasing very fast. When accommodation for 1,000 infants had thus been provided, they would be able to get to work better. The subject was referred to the committee.

## "NATIONAL HEALTH SOCIETY."

A MEETING was held at the rooms of the Social Science Association on Friday, the 10th, to confer with some ladies, who have formed a society for the cultivation of the knowledge and practice of sanitary laws. Among the ladies of the society are Miss Twining, Mrs. William Grey, Miss E. Blackwell, Madame Parkes-Belloc, Baroness M. de Rothschild, Madame Bodichon, Mrs. Kingsley, and Miss Goldsmid. Among the gentlemen present were Mr. George Hastings, Mr. Ernest Hart, Mr. E. Chadwick, C.B., Dr. Sieveking, Dr. Corfield, Mr. Westlake, Mr. Pears, and Dr. Hardwicke. A lucid statement made of the objects of the society showed that it purposed to assist in the formation of local societies, to induce schools to include sanitary instruction in their teachings, and to form an office for answering questions from private individuals and others as to the proper modes of procedure in cases of sanitary difficulty, and to establish a reference library, with plans, models, and papers. In the discussion which followed, several of the ladies spoke of the great difficulty they had themselves experienced in their endeavours to apply sanitary laws, and they mentioned the desire which many ladies had to assist in this properly home work. Mr. Hastings, Mr. Hart, and Mr. Chadwick spoke with regard to the means of organising, and as to the practical means of working such a scheme; and it was understood that the National Health Society would formally apply to be admitted as an affiliated society to the health department of the Social Science Association. The new society has a fund of several hundred pounds, and a fair list of members, and the general opinion of the meeting was that by a judicious and active maintenance of its programme it would render assistance in an important movement.

## SHRINES.

SIR,—In restoring the shrine of St. Alban it would be interesting to compare it with the remains of the shrine in the church in Dorchester, Oxon. The portion existing comprises the groined covering to the ten niches: it is of quite as elaborate a character as that at St. Alban's, and the arrangement is identical: the covering is constructed in four stones jointed over the thin partitions between the niches, the entire length being 7 ft. 6 in. I regret that I had not time when at Dorchester in 1867 to make a drawing. I could have offered to illustrate the subject; perhaps since then other portions may have been discovered.

S. J. NICHOLL.

## MODEL DWELLINGS, CLERKENWELL.

THE building of a block of model dwellings, in Rawstorne-street, by the Brewers' Company, is mentioned by the *Clerkenwell News*. The writer says,—"Bronchitis and affections of the throat and lungs have—say the doctors,—been prevalent in buildings of this kind, by reason of the openness of the staircase and landings. The Brewers' Company's dwellings are erected with a view to obviate this discomfort, the slips and landings leading to the different tenements being better protected from the inclemency of the weather. At the same time there is sufficient of ventilation and air. The block in question is four stories high, and consists of three distinct houses in a row, with three separate entrances. After ascending a stone staircase, we reach a landing, which divides two distinct sets of rooms sufficient, in size, to accommodate two families decently. The number of tenements provided is eight in each house, or twenty-four altogether. Each set contains a living-room, 13 ft. by 10 ft., two bed-rooms, respectively 10 ft. by 10 ft., and 10 ft. by 7 ft.; a scullery, water-closet, pantry, a place for coals, a shoot for dust, with all the necessary fittings. The building is of fireproof construction throughout, and has a flat roof overlooking Northampton-square, which is admirably adapted for a drying-place. Its altitude will no doubt render it a pleasant lounging retreat in the spring and summer months. Mr. E. H. Martineau, architect, Lincoln's-inn-fields, has designed the building, and the contractors are Messrs. Cubitt & Co."

## A MILLINER OF A MILLION.

WE have often admired, on the person of a charming little lady of our acquaintance, the tasteful draperies provided by Madame Louise, the Court milliner of Regent-street; but it never occurred to us that we should have to give this *artiste* public praise. However, so it is. Hanover Church, in Regent-street, designed by the late Professor Cockerell, has long been in a miserably dilapidated condition, both inside and out; and, unless we are misinformed, the lady in question has undertaken to defray a considerable portion of the cost of putting it into repair. It is to be hoped the work will be confided to good hands.

## GUERNSEY.

WE hear that the building committee appointed by the States, of which Mr. Henry Tupper is chairman, have determined on re-arranging the present Fish and Vegetable Markets, and adding an extensive wing to the existing building. The work has been entrusted to Mr. John Newton, architect: 6,000*l.* have already been granted by the States towards this object, but it is expected that the necessary alterations will considerably exceed that amount. The work of demolition of the old buildings is progressing with a view to clearing the site, under the local superintendence of Mr. Duquemin, the States surveyor.

## THE TRADES MOVEMENT.

*London.*—On Saturday and Monday last meetings of carpenters and joiners have been held, the first meeting being of delegates, and the last a general meeting, to determine on the course to be taken in consequence of the masters having refused to comply with a memorial requesting that the hours of work be reduced from fifty-six hours and a half to fifty-one hours per week, and that the wages be advanced from 8d. to 9d. per hour, making 1*l.* 18s. 3d. per week. The meeting was numerously attended, St. James's Hall being quite full. Mr. Lloyd Jones occupied the chair, and opened the proceedings by an address on the economical phase of the question, contending that the men were perfectly justified in their endeavours to attain the objects they desired. Mr. Wright moved the first resolution:—"That this meeting fully approves of the course taken by the delegates from the carpenters and joiners in the London district in the memorial to the employers for a reduction of the hours of labour from ten to nine hours a day, and for an advance in the wages from 8d. to 9d. an hour." The motion was seconded by Mr. Peushun, supported by Mr. Harry, and unanimously carried. Mr. Sadler read the proposed new rules, the principal of which were, that the hours of work should be nine per day, except Saturdays, when they should be six hours, making fifty-one hours per week; that the wages be 9d. per hour; that overtime be paid for at the rate of time and a half, and double after certain hours, but be discountenanced; that piecework be totally abolished in the London district (the meeting showed their high approval of this particular rule by cheering loudly when it was read); that no alteration be made in these rules without six months' notice; and that any proposed alteration be submitted to the arbitration of an equal number of masters and men. He moved a resolution approving of those rules. Mr. Hillyer and Mr. Butler spoke in support of the resolution, which, like the former one, was agreed to unanimously. Mr. Sinclair moved the following resolution, which was afterwards carried:—"That this meeting views with dissatisfaction and regret the position taken by the Master Builders' Society in refusing to receive a deputation from the carpenters and joiners of London to discuss the terms of their memorial, with the view of coming to an amicable settlement, having thus ignored our claims and disregarded our overtures, leaving us the only alternative for adopting the necessary means for enforcing what we believe to be a just and reasonable demand; and this meeting is of opinion that we should take action on the 1st of June, by ceasing work in such firms as the delegates shall decide, unless in the meantime the employers made known their willingness to accede to our demands; and we hereby pledge ourselves to give all the moral and pecuniary aid in our power for the furtherance of the movement."

*Stafford.*—An advance of wages and the nine-hours system for winter work have been conceded to the carpenters and joiners of North Staffordshire.

*Congleton.*—The strike of bricklayers, joiners, carpenters, and other branches, for the reduction of time, namely, half an hour per day, has come to a termination. The masters held a meeting, and agreed to grant the concession required, but in the event of any further demand or alteration, six months' notice to be given by both masters and men. The workmen have returned to their employment.

*Morpeth.*—The master builders of Morpeth (with the exception of Mr. James Middlemas), having declined to reduce the working hours to fifty per week, the working masons of the town met, and resolved to strike at once, and remain out till their demand, of which the masters had two months' notice, is conceded. The strike, however, has since terminated, the masters having agreed to the terms asked by the men.

*Durham.*—The journeymen painters of Durham turned out on strike in consequence of the masters having declined to accede to their request for the nine-hours movement. Hitherto the men, who are paid by time, worked 56½ hours for a fraction within 26s. per week, and this time they have asked to be reduced to 54 hours per week, without any corresponding deduction in their wages. After remaining out for a couple of days, one or two of the masters acceded to the application of the men, and we understand that the others have since agreed to their terms, and the men have consequently returned to their work.

*Dundee.*—A short time ago the journeymen plumbers of Dundee memorialised their employers for an increase of wages from 5½d. and 6d. to 6d. and 6½d. per hour. Six of the masters complied with the request; but in the other shops, both in Dundee and Broughty Ferry, the men came out on strike.

*Waterford.* — The Waterford carpenters, masons, and plasterers went out on strike for an increase of wages to 28s., and the master carpenters conceded the advance.

*Berlin.*—The united master masons, builders, and carpenters, have met, and the conditions as to time and wages granted to the Eastern trade-unions of the journeymen masons and builders were unanimously conceded. By these conditions the day work is to consist of ten hours, and the rate of payment to be from 1 1-3 of a thaler to 1½. It has, therefore, been determined to resume work at once.

*Copenhagen.* — A daily paper, called the *Socialist*, has been established, and also an International Society, with a person called Pio as "Grand Master." The International arranged a general strike of the masons and bricklayers, who had their wages increased seven or eight months ago. Several hundreds left work, and were followed by the majority of the masons. The strike has now gone on for five or six weeks, and no other workmen can be got. It was arranged in the midst of some unpleasantness with the authorities, to have an open-air meeting, but this has been prevented.

## THE THREATENED STRIKE IN LONDON.

SIR,—I observe in the reports of the meeting of carpenters and joiners at St. James's Hall, that complaint is made that the Builders' Society declined a discussion with a deputation of their body. The only reason for such refusal is that there was really nothing to discuss. The Builders' Society had only just seen a deputation of the Operative Masons, and it appeared that there was but one point of difference, viz., whether the employers would increase the wages from 8d. to 9d. per hour. The employers consider that 8d. per hour is a liberal rate of wages for an ordinary mechanic, and declined to increase it. The operatives said that they would not have less than the present hours, viz., fifty-six and a half per week, unless the wages were raised to 9d.; so that there was no use in going into the discussion of hours at all. The present

hours of builders in London are, as you are aware, fifty-six and a half in summer and fifty and a half in winter. The engineers and other trades have recently agreed to work fifty-four hours all the year round. The question of hours therefore can be no grievance, and is really mere moonshine, and designed only to throw a mist over the subject. The strike of the carpenters and joiners, if it take place on the 1st of June, will be for a rise of 12½ per cent. in wages, and for that alone. Moreover, one of the speakers at St. James's Hall (Mr. Wright) expressly said, when they had got the 9d., they could go in for something more. Considering as we do that 8d. per hour is a liberal payment, it will be our duty on this occasion to resist to the utmost a rise.

A MASTER BUILDER.

SIR,—A short time since we received circulars from the Masons' and Joiners' Societies asking for a concession of the fifty-one hours per week and rise of wages from 8d. to 9d. per hour. We considered this an unreasonable demand, and, on a conference with our men, they unanimously accepted our offer of a working week to consist of fifty-four hours, and wages at the rate of 8½d. per hour; and the joiners, masons, and metal-workers in our employ have for some weeks been paid on this scale. This is a compromise which we believe master builders in London would willingly give, and we also believe the large majority of men would gladly accept if they were allowed to do so by those who profess to represent them. The hardship and misery entailed on the working classes by these unfortunate strikes, is incalculable, and we do hope the present dispute will be amicably settled without recourse being had to any extreme measure.

COX & SONS.

## THE DOCK AND WATERSIDE LABOURERS.

AN organisation or union, embracing the dock wharf, waterside, and general labourers, was formed a few days ago, and already counts several hundred members. The object sought is to obtain a uniform rate of pay for all, at the rate of 6d. per hour while employed. The condition of the dock labourer has for a long time been very wretched indeed, and nothing is more pitiable than the sight of numbers of men in cold and rainy weather, standing outside the dock gates, shivering with cold and hunger, anxiously waiting for "a call." Surely when a sympathy has been expressed for the cabman and his horse, and efforts are making to afford him a covered stand while waiting for a "fare," the dock authorities ought to be moved with a Christian feeling to provide even a temporary wooden shed, with seats, somewhere within the dock gates, for those labourers who are in the habit of being employed by them.

There is not the least difficulty in the way, and the act would conduce to the respect of the dock management, and put an end to a rather dismal street exhibition.

## GENERAL MEETING OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

THE annual general meeting of the Institute was held on the 6th inst., Mr. T. H. Wyatt, president, in the chair, when the annual report of the Council for the current year was read and adopted. The report mainly reviewed the past, with which our readers are already acquainted. The following gentlemen were then elected office bearers for the ensuing year:—

President,—Thomas Henry Wyatt. Vice-Presidents,—Horace Jones, A. Waterhouse, John Gibson.* Ordinary Members of Council,—G. Aitchison, B.A., W. Burges, T. T. Bury,* T. C. Clarke,* H. Dawson, Professor Kerr, E. H. Martineau,* Harry Oliver,* W. Papworth,* R. L. Roumieu, J. P. St. Aubyn, R. J. Withers,* W. M. Fawcett, J. Fowler, E. Sharpe, M.A. Honorary Secretary,—F. P. Cockerell (foreign correspondence). Secretary,—C. L. Eastlake (home duties). Auditors,—Ewan Christian, Fellow; E. J. Tarver, Associate. Honorary Treasurer and Banker,—Sir W. R. Farquhar. Honorary Solicitor,—F. Ouvry.

The following gentlemen were appointed as a Board of District Surveyorship Examiners:—

G. Aitchison, B.A., J. Belcher, W. A. Boulnois, H. Dawson, C. Fowler, C. F. Hayward, F.S.A., E. I'Anson, F.R.G.S., J. Jennings, Professor Kerr, J. T. Knowles, Professor Lewis, F.S.A., E. Nash, C. C. Nelson, F.S.A., H. Oliver, E. W. Tarn, M.A., J. Whicheord, F.S.A., S. Wood, and the Hon. Secretary.

Mr. C. C. Nelson, F.S.A., related the circumstances under which the portraits of Mr. Beresford Hope, M.P., and Professor Donaldson, had been painted by Mr. Charles Martin, and gave the following statement of receipts and disbursements on account of the subscription fund:—Cost of the two portraits and frames, 172*l.* 4*s.*; amount of subscriptions received (from sixty members), 124*l.* 18*s.*; amount still required, 47*l.* 6*s.* A vote of thanks was passed to Mr. Nelson for his services as honorary treasurer to the fund.

Mr. C. F. Hayward, in reference to a suggestion of the Council that the expenses of the next Conference should be met by subscription, said that if this were necessary he thought a fixed and uniform charge should be made to all who attend the Conference meetings; but he had hoped that the sale of papers read at the Conference would have covered its expense. Mr. C. L. Eastlake, secretary, stated that although they had been duly advertised only a few copies of the Conference papers had been sold. The cost of the late Conference, including the printer's account, was 132*l.* 12*s.* 7*d.* Mr. C. C. Nelson said he hoped that the printer's account would be less this year. The papers read at the late Conference were numerous, and the discussions very lengthy. He suggested that the range of subjects should be limited to questions of professional practice, and that the discussions should not be printed *in extenso*.

* Newly-elected Members.

## THE INTERNATIONAL EXHIBITION, 1872.

SIR,—In the article on the above in your issue of May 4th you speak favourably of our exhibits—No. 1,064, the west window of St. Paul's, Dock-street; No. 2,781, an ebonised cabinet; No. 2,772, a carved bookcase and cabinet; No. 2,771, a fire-place with painted tiles, oak cornice and framing; but in no one instance do you mention our names as the manufacturers. For some years past we have fallen in with the suggestion which many manufacturers still decline to act upon—that in exhibitions the names of the designers of the work should be made known; but while we are glad that due credit should be given to the artists, it is hardly fair that we, the manufacturers, who have expended over 1,000*l.* in the production of our exhibits, and whose practical experience and suggestions have contributed something even to the success of the designs, should be entirely ignored. We hope that you will find space to insert this.

COX & SONS.

## CITY GUILDS.

SIR,—Allow me respectfully to note that your "Hint to the City Guilds" is likely, by its general terms, to defame the fair character of some of these bodies upon insufficient grounds. I know, from experience, that the funds of many of these companies are honestly, beneficially, and wisely applied. They are of two sorts, Trust and Corporate, and the moneys that belong to trusts are scrupulously spent in the direction for which they were bequeathed; and, moreover, large sums are frequently drawn from corporate funds to fill up deficiencies in trust-moneys; and thus the charitable gifts are augmented out of the private funds of the company. I see no more reason for carping at the riches of a corporation than for doing so at the riches of an individual. Individuals are allowed to give "expensive dinners," and to have "portraits taken," and to do other honest things for themselves, if they do it with their own money. Besides, too, the corporate,—that is to say, the private funds,—of a company are often spent ungrudgingly in charitable and lofty aims, such as education; and surely a moderate fee may be paid out of those private funds for transacting important business at a court, while the same is done at insurance offices, banking corporations, and other business companies. I might notice much more; but I will conclude with the remark that reform where reform is needed is desirable, but that change where change is not needed is revolution.

EDWIN NASH.

## TECHNICAL TERMS.

I JOIN with others in desiring to see a good dictionary of terms used in the building and engineering trades, setting forth the variations, according to the locality, &c. Other terms than those that have been mentioned come to mind. Mortar, composed of lime and sand, is always called mortar in London and the south, but in South Lancashire and the West Riding of Yorkshire it is always called "lime." Purlins, also, in South Lancashire, are called "pans;" in the West of England, "side-pieces." Rafters are called "spars" in Lancashire; principal rafters are called "backs." But these should appear in tabulated form, and a very good beginning of a dictionary might be made by one person at least in every locality sending you, sir, the local name of the various parts or operations in a building, leaving it to you to dissect, tabulate, and publish in the *Builder* all local idioms. And this need not be confined to our own country, or even to our own empire. We do building and engineering for every nation almost under heaven, and it will not only be useful but highly instructive to compare words and trace derivations, through the languages of all the great races of the human family.

E. G.

## METROPOLIS WATER ACT, 1871.

REGULATIONS AS TO CONSTANT SERVICE.

THE Board of Trade, taking action as empowered by the 17th and 22nd Sections of the Metropolis Water Act, 1871, have nominated his Grace Charles Henry, Duke of Richmond, K.G., to preside at the necessary inquiry to take place under the powers of the said Act; as also, Mr. Robert Rawlinson, C.B., and Captain Tyler, late Royal Engineers, to advise and assist at such inquiry. It will be remembered that the Duke of Richmond presided as chairman at the Royal Commission which recently inquired and reported on water supply.

AT the meeting of the Board of Works, Mr. H. L. Taylor in the chair, the Parliamentary Committee presented a report on the regulations for a constant supply of water, made by the Metropolitan Water Companies, and submitting a series of amended regulations to be proposed to the Board of Trade, in substitution for those made by the companies. Mr. Dalton said the regulations proposed by the companies were of such a restrictive character that if they were adopted there would in fact be no constant supply. The regulations did not become law till they had received the sanction of the Board of Trade. That Board had referred the regulations for the opinion of this Board. He moved the adoption of amended regulations, which would secure to the inhabitants a constant supply of water. Mr. Newton said this was a most important matter, because, if the companies should succeed in passing their regulations, they would defeat the object the Board had in view. The motion was carried.

## A COUNTRY HOUSE: OAKLANDS, HALSTEAD.

THE house at Halstead, in Essex, of which we give illustrations to-day, is built of local bricks of yellowish white colour. Some moulded stone has been used for window-heads and columns of windows, and for the porch.

The internal woodwork of staircase, hall ceilings, and passages adjoining is carefully designed, and well worked out in deal and oak, being furnished with only slight staining and varnishing.

The entrance vestibule and the conservatory have been laid with tiles from the Poole Pottery Company.

The chimney-pieces are good specimens of solid Devonshire marble from Plymouth.

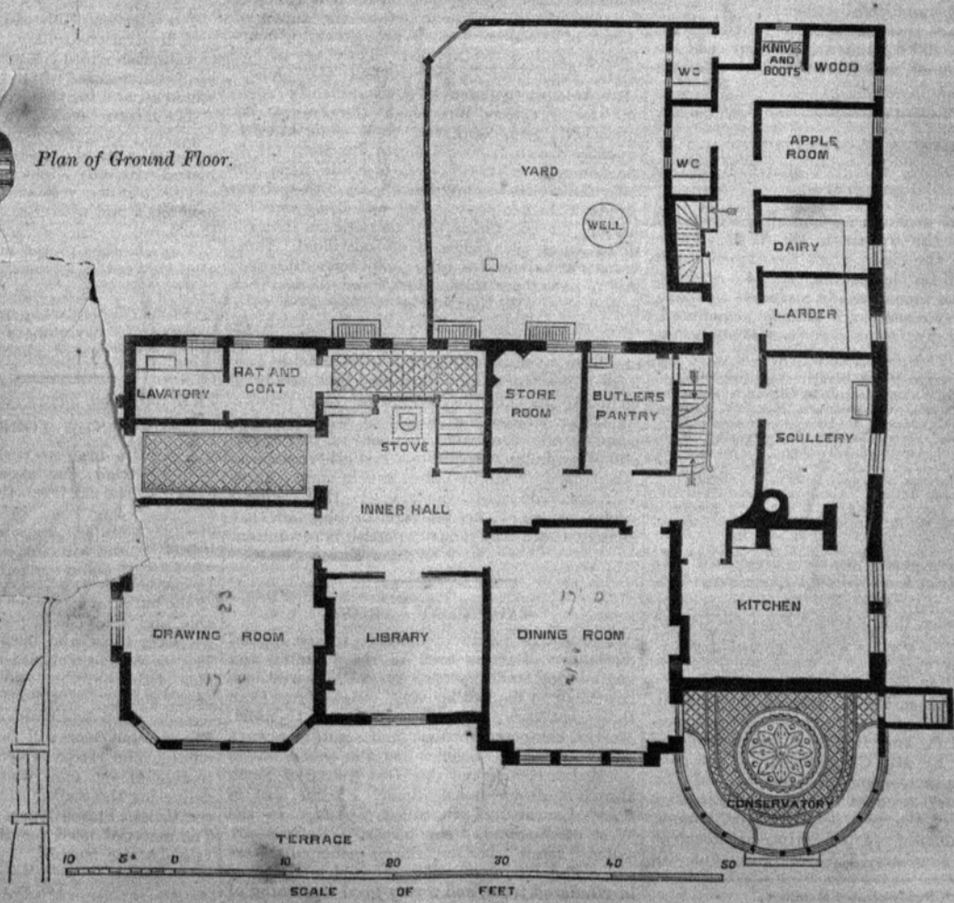
Mr. C. F. Hayward, F.S.A., was the architect, under whose superintendence the work was carried out by Mr. J. Sudbury, jun., of Halstead, at a cost, inclusive of fittings, of about 3,000*l.*

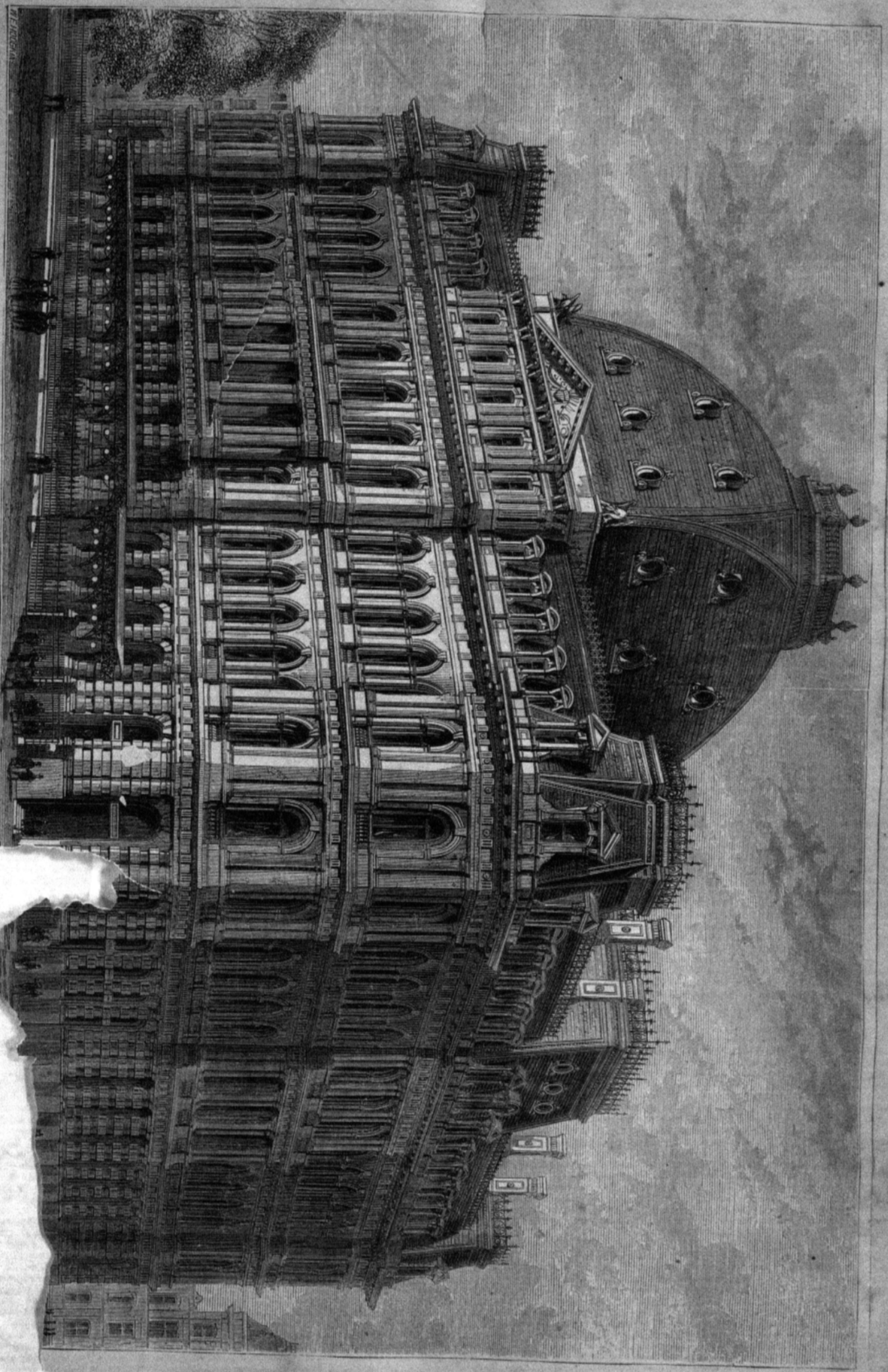
## THE UNITED STATES POST-OFFICE AND COURT-HOUSE, NEW YORK CITY.

THE new post-office in New York City, U.S., is a building of large size, having a frontage of 280 ft. on the Park, and 222 ft. on the Broadway, and Park-row. It has been built from the designs of Mr. A. B. Mullett, Supervising Architect of the Treasury, and will cost, it is estimated, when fully completed, about one million sterling. In our volume for 1871,* we gave a view of part of the building from such materials as were available, and some descriptive particulars to which we refer those who desire further information. The view, however, did not give a satisfactory idea of the building, and at the request of some of our readers on the other side of the Atlantic we now publish a view of the north-west front. The ground-floor will be devoted to the post-office. The glazed projecting roof is for the protection of the mail wagons while receiving or delivering the mails. The upper stories contain the United States Courts and their dependencies. The material used for the exterior is the Dix Island white marble.

* Vol. xxix., p. 924.

A COUNTRY RESIDENCE: HOUSE AT HALSTEAD, ESSEX.—Mr. C. F. Hayward, Architect.





UNITED STATES POST-OFFICE AND COURT-HOUSE, NEW YORK

## A VISION OF THE FUTURE.

*After reading the "State of English Architecture" in the "Quarterly Review."*

Time, 1882. Season, Summer.

SCENE. *House in course of erection.* NOBLE WORKING MAN *discovered sitting with chisel in hand; standing by his side, his* SON.

*Son.* Well, father, you do not make much progress!

*N. W. Man.* How ridiculously you prattle! Am I not waiting for an idea?

*Son.* Well, that is a pleasing way to spend time; why did you not let me learn your art instead of making me a shoemaker?

*N. W. Man.* My son, I may tell you now. Hitherto I have only said I did so because it was for your good; now I feel I may be more explicit, as my day is near its close. You have noticed that I have lately been willing to shorten the time that the "soft-handed gentlemen" should serve me. Stop, I must explain from the beginning. Sit down and listen, and you will learn much. Some ten years since I was a common mason, when there appeared an article on architecture, in a well-reputed journal of that day, stating that instead of noble working men such as had existed in the fourteenth century, a so-called architectural profession had sprung up, [illegible] occasion. [illegible]mprised "a number of soft-handed [illegible]," and that consequently there was "no [illegible]e for expression in the work, and none of that [illegible]andling,' the evidence of the artist's presence and effort, which is as valuable in building," &c. In another part it said, "The best buildings of all ages have been made, not by professional gentlemen and their drawing-clerks, but by labouring handicraftsmen of various schools of art."

*Son.* How well you seem to remember what the author said.

*N. W. Man.* I should think so! Why I have read nothing else. I have formed myself on his words. I call that article my prophet, my guide. I refused at once to work under any architect, or for any one who employed a surveyor. The novelty took, and I became the true artist, as my guide calls it, and tell all my clients (I like the word, though it is modern) that I work only to please or satisfy myself (his words again) regardless alike of the public or patrons; and in setting myself against all the learning of the profession, I say, quoting again my prophet, that till I started, "The fact was we had no such thing as a building art. This had been entirely lost. We had what was called a profession of architecture, which, as it pretended to the practice of art, was in the nature of an imposture." So have I thriven.

*Enter* YOUNG LAWYER.

*N. W. Man (aside to* SON). Here comes that scamp of a common-sense man who will not believe in me.

*Young Lawyer.* What! not yet up to the first floor: surely even you cannot justify such delay. Why, under the old system with architects, the building would have been at least covered in.

*N. W. Man.* Contemptuous, as usual, of art. You forget all the dogma. I am the "master worker," the associated "chief master," and superintendent of "creators;" my work is, as our guide ten years since so ably expressed it, "simply a delight to me;" it is the "outward form and expression of a mind sympathetic and serious, but not in the slightest degree superstitious or debased."

*Y. Lawyer.* I confess I do not understand this twaddle. Since the time you mention science has made rapid advances. The railways,—so much thought of then,—have become almost like the old stage-coaches were to the people of that day. We now glide through the air, without fear of accidents or any jolting, and perform the distance in one-fourth the time. The post-office system is almost antiquated, messages being sent instead, as you know, at a charge of 1d. each all over the kingdom; and the charge for a telegram to India is 3d., which then cost 3*l*. The postal charge is reduced to 0½d., which tempts the very poor still to use it. The bottom of the sea is so covered with wires, laid in all directions, that I believe the very fish must be afraid it is a huge net put there to catch them. Fireplaces are things of the past, and every house is warmed and has hydraulic power in use therein supplied by public companies, which would surprise people who lived in the last decade as much as gas would have surprised their predecessor; and you only go *backwards*. Your building seems as if it would never be completed: you draw large sums of money, and yet make no show or progress therewith; and when I complain that you are ruining my client, you simply answer you cannot help it; you are creating and building a monument: that you are trying to improve until you equal the work of the fourteenth century,—and such contemptible humbug. Fancy my talking such nonsense about my profession—that I was trying to arrive at the system pursued by King Alfred! I should be laughed at and lose all my business. By the bye, see what progress there has been in the law. No chancery—only one court, one law; no long vacation; county court able to deal with nearly all matters; one superior court. Judges always sitting, and while there are no more judges than there were ten years ago, each judge has his vacation, just as clerks and partners in great commercial houses. Why, now the law is simple and understood, and in ten weeks any suit may be concluded, even if there be an appeal, which, at the time you speak of, would have taken from ten to twenty years. What can I say to my client, Sir John?

*N. W. Man.* Say what you please. He dares not leave me. I am the leader of the day, and what I say is law. Sir John wants me quite as much as, ten years since, he would have wanted Gilbert Scott. Now I think of it, what have you done as to the house he occupies till this is finished?

*Y. Lawyer.* Why about that he bade me consult you. They will not let him remain unless he will take another lease for seven years at least.

*N. W. Man.* Say he had better take it. But I will do all I can that he may get in. I and my associates will live on the most generous diet,—at his expense, of course,—to incite our inventive talents; but under such pressure our brains may give way, and rest may be necessary.

*Y. Lawyer.* I see no inventive genius yet displayed. The building is quite barren of ornament. The only ornament is broken in pieces on the ground, and which you told me was experimental.

*N. W. Man.* You forget one of our dogmas. I must remind you, "Nothing is more remarkable than the way in which opportunities for decoration are neglected. The builder goes on working in the quietest way until he has a worthy idea to express, and then he does it in the most unconscious manner." And again, "How many a village church can be brought to mind where there is not even an external plinth, but the rudest unsophistical wall, a stumpy 'ungraceful' but very sensible and useful tower, and scarcely a moulding or ornament about the building, until in some unobtrusive doorway or aisle window we find a gem of thought that gives dignity and refinement to the entire work." True, I am nearly ready as you say for the first floor joists, and not anything appears but plain walling; but I and my creators have waited days and days for ideas, and they will come to us yet as they did to those glorious men of the fourteenth century whom we strive so closely to follow.

*Y. Lawyer.* I will tell you what I have done. Believing you are robbing my client, I saw a quantity surveyor. Poor fellow, he had a large business ten years since: now he tells me he has nothing to do, because you and your class, who have superseded architects, will not allow that your work can be computed by any one: and he has, for years, been measuring, over and over again, the house he lives in, as he tells me, that he may remember how to do the work when the public shall be sick of your nonsense. I stated what I wanted; but told him I believed you and your associates would kill him if he were discovered. His answer was, that the pleasure of doing real work and earning money thereby would make him brave any risk. He chose his time, and I hold here his calculation. He has added 20 per cent. to what he would have allowed when in practice, and states that it is almost unfair to do so, because now so few building materials are used by you and your associates that the price thereof is almost nominal; still, the value of any kind of labour must be more, because of the expensive style of living that you adopt. The result will surprise even you. It comes to but one-*fourth* of the money you have had.

*N. W. Man.* I am not surprised. Ours is no mercenary trade. One last quotation from the founder of our grand system will perhaps convince you. He has said "The workmen then were quite at ease. They worked among intelligent and sympathising friends. For three hundred years we have been trying to build from above downwards. The connoisseurs have pretended to teach the public how to build, and the public fail to learn. Can we not ask the *working man* to show us what to do?" I, the leader of that noble band, ask you to watch. Think you in ten years we could undo the great evils of three centuries? No. It is for you to wait at least another decade; then you will be the first to proclaim the grandness achieved by the noble working men, unfettered by architect, untrammelled by quantity surveyor or thought of money.

*Y. Lawyer.* Shall I? But I have no time for discussion, or I would ask you if you think you have yet reached the fourteenth century. My lady wished me to ask whether you have arranged for the day and night nurseries, and what aspect they will have. She thought there must be some plan or drawing, showing what rooms there would be; but I explained that there were none in the *new* system of building, but that I had no doubt you could tell me.

*N. W. Man.* I cannot; it is too small a thing to engage my attention. I doubt not there will be some rooms that could be adapted; if not, we can easily throw out a wing somewhere.

*Y. Lawyer.* Could you not, as a great favour, find out, so that the wing, if necessary, might be *now* commenced; otherwise her ladyship's children will be grown up before it could be erected.

*N. W. Man.* It shall have attention.

*Y. Lawyer* (going). Oh! by-the-bye, Sir John desired me to ask in what style the building is supposed to be? He had an old friend dining with him, who asked the question, and Sir John replied, he thought the Fourteenth-century Gothic; but he really did not know, as there had never been any drawing, and, though you had been five years at work, nothing could he see except plain walling, and very little of that.

*N. W. Man.* You seem to enjoy repeating his spiteful remarks! How true that art has ever suffered by contact with cold-blooded men of the world!

*Y. Lawyer.* Well, you seem to have made plenty of money, and I suppose you consider yourself the embodiment of "art," and the houses you have bought (not built) must be very profitable, now that so long a time is taken to erect new ones. I should not wonder if this is also a portion of your scheme.

*N. W. Man.* Go on, sir. I shall not be the first martyr to my noble cause.

*Y. Lawyer.* Humbug!

[*Exit* YOUNG LAWYER.

*Son.* He does not seem to like you.

*N. W. Man.* I told you he did not; and his common sense, I am afraid, will be too much for my glorious ideas: still, Son, there is some comfort. I have done well, and can retire now on a very sufficient income. I should have liked the idea to continue, however, somewhat longer; so that I might receive adulation for the rest of my life, and grand articles in the papers when I quit this sphere. The latter seems absurd, you will say, but I think you are wrong; it must be a pleasure, even on one's death-bed, to know that your country will on the morrow resound with your late greatness.

*Curtain drops.*

B. F.

## THE THAMES EMBANKMENT CASE OF THE DUKE OF BUCCLEUCH.

IN the House of Lords Appeals, on April 30th, before Lord Chelmsford, Lord Westbury, Lord Colonsay, and Lord Cairns, judgment was given in the case of the Duke of Buccleuch *v.* The Metropolitan Board of Works.

In this case, the Duke of Buccleuch sought to recover compensation from the Metropolitan Board of Works for construction of the Thames Embankment between Montagu House and the river. The matter having been referred to arbitration, the umpire, Mr. Chas. Pollock, Q.C., awarded to his Grace the sum of 8,325*l*. This sum the Metropolitan Board of Works declined to pay; and on his Grace endeavouring to enforce the award by action, they called as a witness on their behalf the umpire, who stated that his award had been arrived at as follows:—For loss of causeway, 200*l*.; for structural damage to walls, 50*l*.; for capitalised rent of garden, 2,475*l*.; expense of building a wall, laying out the garden, and other matters, 600*l*.; and for loss of privacy and other amenities of the house, 5,000*l*. The verdict passed for the plaintiff, subject to the opinion of the court above, on the questions whether the evidence of the umpire was admissible; and, secondly, whether if it were it had disclosed that the umpire had based his calculations of the amount to be awarded on matters which he had no right to look at in assessing the amount of compensation due to his Grace. The Court of Exchequer were unanimous in their judgment that the plaintiff was entitled to retain his verdict, but were not agreed in their reasons, the Lord Chief Baron and Barons Martin and Channell being of opinion that the evidence of the umpire was admissible, but that it showed that the umpire had proceeded on a right ground, and that the award was good; while Baron Bramwell was of opinion that certain parts of the evidence of

to see, would always be met with the excuse that the Home Office had in preparation a general measure of municipal reform for the whole metropolis.

Mr. Julian Goldsmid, M.P., said nevertheless, if the Government made no sign, he should next session endeavour to get a Bill passed to transfer the election from the vestries to the ratepayers.

The motion was carried unanimously, but the meeting negatived a second proposal that the right hon. gentleman should have his attention called to direct representation, and be invited to take up that part of the question also.

At the request of Dr. Stallard, it was agreed to solicit the vestries to join in the deputation.

## CONFERENCE OF ARCHITECTS.

A COMMITTEE to arrange the proceedings at the approaching conference has been appointed by the Institute, and at its first meeting, held on Tuesday last, did good work. As we do not yet know whether secresy or publicity is to be the order of the day, we content ourselves with saying that the first meeting will probably be held on the evening of Monday, the 10th of June; other meetings on the 11th, 12th, and 13th; and that a dinner on Friday, the 14th, will close the proceedings, as on the last occasion.

## GLAZED SURFACE.

SIR,—I want to know a substitute for *glazed bricks* for lining walls, that can be had at a reasonable cost, glazed bricks being now very high in price, and exceedingly difficult to procure for immediate delivery.

Wall tiles are rarely true, and generally dear. Most of the cements for plastering seem too liable to chip under hard usage. What I want is a hard glazed surface, at a small cost.

AN ARCHITECT.

## CHURCHES AND OTHER BUILDINGS STRUCK BY LIGHTNING.

LAST year we pointed attention to the fact that lightning was then more destructive than it had been since the year before the great earthquake. Various physical commotions of serious import have occurred since that,—such as the earthquakes in California and at Antioch, as well as in Upper Asia, in Australia, and in Iceland. The commotion of Vesuvius, too, has been notable; and still we find hurricanes, as at Zanzibar and Madras, and the lightning in this country, more destructive than usual. The parish church of Rainham, East Kent, has been struck, as also the parish church of Mashbury, Essex, which has been set on fire. The spire and belfry, which were of wood, soon succumbed to the flames, which, fanned by a strong wind, travelled eastward along the roof of the nave, feeding on the timbers between the plastering and the tiles. The fire was beaten back, so as to preserve the church. The roof of the nave is destroyed, and some of the fittings damaged by falling *débris*, the damage being estimated at about 200*l*. At Bampton the lightning has struck the spire of the parish church, where five iron clamps are fixed. The spire is about 180 ft. high. The force displaced ten courses of stonework on the northern side, or about 15 ft. It also split the spire on the south side. It apparently passed over the bells, destroying the wires connecting the chimes with the clock. It is supposed about 40 ft. will have to be rebuilt. Several trees in the neighbourhood were also struck. Houses at various places, as at Tamworth and at Deptford, have also been struck by lightning.

## UTILISATION OF ST. PAUL'S.

SIR,—I presume that the authorities of St. Paul's have now discovered that it is impossible to utilise the whole of the church at one service. Two Sundays ago we had the Lord Mayor and the Judges present. The sermon was preached from the pulpit under the dome, where the crowd of worshippers were. The Lord Mayor and the Judges occupied their usual seats in the choir. The seats beyond that occupied by the Lord Mayor were vacant. Whether he or the Judges could hear the sermon, separated as they were from the rest of the congregation, I very much doubt. It would be well if they could be asked the question. I sat midway between them and the preacher, and distinct as Canon Liddon is in his utterance, and clear and audible as is his voice, I with difficulty could follow him, and frequently lost what he said. But it was painful to see the Lord Mayor and the other authorities of the City, with her Majesty's Judges, put out, as it were, in the cold,—thrust away into the choir, and separated from the rest of the congregation.

The great mistake of the day is "monster" everything. Man is but a pigmy being. His powers of speaking and of listening are limited. If there is no limit to man's power of speaking and listening, let one monster cathedral be built for the whole metropolis, and do away with all the churches. Some of the churches built not long ago prove the folly of such a vain attempt. Very large churches no ordinary voice can fill. Take, for instance, St. John's, Waterloo-road. The object of the architect lately called in there has been to curtail its dimensions, and bring all within the hearing of the preacher.

Mr. Street has advocated, and, I think, rightly, that the choir at St. Paul's ought to be separated from the nave; in other words, that there should be two places of worship, one for the ordinary and another for the larger congregations. This cannot be done till the organ is brought back to its old place, or nearly so, and the choir screened off from the nave.

The distance of the altar-table from the congregation assembled under the dome, and the long avenue of nakedness between the one and the other, has a chilling and deterring effect. This is evidenced by the smallness of the number of the communicants. I assisted two or three Sundays ago, when we had only seven: last Sunday, I am told, there were only three. Nothing more need be said, to show that the attempt to utilise the whole of the church at one service is a mistake.

In conclusion, I beg to ask, for what purpose the several handsome presents of communion-plate have been made, if they are not to be placed on the altar?

JAMES LUPTON, St. Paul's Cathedral.

## THE LITERARY FUND DINNER.

AT the recent dinner, so admirably presided over by H.M. the King of the Belgians, the numbers present were 433 gentlemen, and 340 ladies in the galleries; and the amount actually subscribed, including H.M. the Queen's annual donation, was over 3,100*l*., an amount, we believe, unexampled in the annals of the Society. The King's speeches were excellent; Mr. Disraeli's perfect in its way; Lord Stanhope and Lord Houghton particularly happy; the music singularly good; in fact, every one concerned deserves praise except the proprietor of St. James's Hall, who gave a very unsatisfactory dinner, shamefully ill-served. We propose to speak seriously before long as to the present condition of London in respect of public dinners, and try if anything can be done to improve it.

## CHURCH-BUILDING NEWS.

*Leicester.*—St. Mark's Church has been consecrated. The building of a church in the district at the lower end of Belgrave-gate formed part of the plan of the Church Extension Society; but Mr. and Miss Herrick took the whole responsibility upon themselves, and the church now erected on the north of Foundry-square is more extensive in plan, and ornate and elaborate in its details, than it would otherwise have been. The site is of irregular form, and the building and its adjuncts have been so designed as to take advantage of its peculiarities with the least possible sacrifice of space. The church consists of nave, chancel, north and south aisles, organ-chamber, and tower at the south-east corner. The nave is 31 ft. 6 in. wide, and 62 ft. long, and 53 ft. high to the ceiling; the chancel is of the same width and height, and 37 ft. 6 in. long, terminating in a semicircular apse. The north aisle is 14 ft. 6 in. wide, and, continuing past the north arch of the chancel, terminates also in an apse, the eastern portion being screened off for a vestry. The south aisle is in three compartments, with gabled roofs, each extending beyond the other to meet the sloping line of the boundary-line of the site; the western bay being 12 ft. 6 in. deep, and the eastern one 25 ft. deep. The tower, which is 25 ft. square, projects still further south, giving thereby, between it and the chancel, an organ-chamber, of ample dimensions, clear both of chancel and aisle, but open by arches to both. At the western end of the church is a vestibule, fitting up to the boundary on that side, having a width of 14 ft. at the southern end, and diminishing to the width of the doorway at the northern termination. The vestibule, which is external to the main building, affords a screen to the three western doors, two of which are hung to open outwards, and is entered from a porch, with double external archway, and double doors next the vestibule, also opening outwards. This provision is made for escape, in case of any sudden alarm. The tower has both internal and external double doors, giving access to the eastern end of the south aisle. The nave is divided into three compartments by three stone arches on each side, supported on pillars having shafts of granite from the Shap Quarries, and foliated capitals and moulded bases of Ketton stone. It is lighted at the western end by a large window of five plain arched lights, the central one rising higher than those at the side. The north aisle is lighted, next the nave, by two windows, each of coupled plain lights, and one of three lights; and next the chancel by a lofty window of three lights. Each compartment of the south aisle has a large three-light window. The chancel has, on the north side, within a larger arch, a double arch, supported in the middle by coupled pillars of Shap granite. Through this arch light is admitted to the chancel from a large north window. Opposite to it is the organ-chamber, which is vaulted with brick, the arch next the chancel being, in the centre 35 ft. high. The apse is divided into seven compartments, by corbel shafts of marble, starting from the base of the lower arcade, and supporting the main ribs of the roof on carved capitals of stone. Between these, in the uppermost stage, is a range of windows, each of a single traceried light, enriched by shafted angles as in the clearstory of the nave. These windows, which range with those of the nave clearstory, are filled with stained glass. Below the windows, the sills of which are 26 ft. above the floor of the nave, there is a series of seven large cusped arches, each 10 ft. high, designed for decorative encrichment. All the seats, both in nave and chancel, are of oak, and the prayer-desk and lectern are of the same material. In the chancel fittings some carving is introduced. The walls are built of slate-stone, of fine colour, obtained from Mr. Herrick's quarries, near Woodhouse, with quoins of the same material; but all dressings, windows, doorways, &c., are of Doulting stone. They are lined internally with red brick, intermixed with Doulting and Derbyshire stone. The roof is framed of fir, covered with Swithland slate. All the eaves, gutters, and upper pipes are of lead. The exterior of the church, excepting the apse and the upper portion of the tower, is of simple character throughout. The spire is wholly of Doulting stone, except tracery-bands of Derbyshire red stone. The bell-chamber windows are all open, the bells resting on a floor covered with lead within the tower. The height of the tower to the parapet is about 80 ft.; of the spire to the top of the finial, 168 ft. The tower contains a peal of eight bells. The seven windows of the apse have been filled with the following subjects, executed in painted glass by Messrs. Ward & Hughes, of London:—The Angel announcing the Nativity to the Shepherds; the Adoration by the Wise Men; the Baptism; the Crucifixion; the Angel at the Tomb; the Sea of Tiberias; and the Ascension. Beneath, in the three centre compartments, is a fresco of the Last Supper, executed by Mr. Allen. On the south side of the chancel is the organ-chamber, in which is placed an organ, by Messrs. Hill & Son, of London. The roof and other parts of the church have been decorated by Messrs. Heaton, Butler, & Payne, of Covent Garden. Those of the ceiling of the apse are subjects representing the canticle, "Benedicite omnia opera." The seats are of oak, and are calculated to accommodate nearly 700 persons. The lighting is effected by a line of gas-jets under the clearstory windows, similar to that in St. Paul's, and executed by Mr. Coleman, Cheapside. The architect was Mr. Ewan Christian, of London; and the whole work has been carried out by the builders, Messrs. Osborne, Brothers, under the clerk of the works, Mr. James Nichols, of London. The heating apparatus was got from Haden & Son, Trowbridge. The plumbing and glazing has been done by Mr. R. W. Widdowson; the altar-railing and ornamental gaswork has been supplied by Mr. Skidmore, of Meriden; and the musical peal of eight bells, by Messrs. Taylor, of Loughborough. The diameter across the mouth of the largest bell is 15¼ in.

the umpire were not admissible, but that if they were he was inclined to think that they showed that the award was made on a wrong principle, although he doubted whether the finding of the umpire could be reviewed. The Court of Exchequer Chamber by a majority of four to three reversed the decision of the Court of Exchequer, on the ground that the evidence of the umpire was admissible, and showed that he had proceeded on an erroneous principle in estimating the amount of the compensation that ought to be awarded to the Duke.

The case was argued last year before their lordships, assisted by six of the learned common-law judges, when the latter, after taking time to consider, by a majority of five to one gave opinions in support of the award.

The counsel who argued the case before their lordships, were Sir Roundell Palmer, Q.C., and Mr. Kemplay for the appellant; and Mr. Hawkins, Q.C., and Mr. Philbrick for the respondents.

Their lordships having taken further time to consider their decision, gave judgment.

Lord Chelmsford, in course of his remarks on the case, said, there can be no doubt, and none has been entertained, that the plaintiff is entitled to compensation in respect of the taking away the causeway and landing-place, and the injury arising to his house and premises by depriving him of access to the river. The only question upon which there has been a difference of opinion among the judges arises upon the award itself, whether the umpire had any power to give compensation for the damage by the depreciation of the mansion-house, lands, tenements, and hereditaments by the otherwise injuriously affecting the same by the execution by the Board of the said works, and by the exercise of the powers of the Act. Now, he was authorised both by the special Act and by the Lands Clauses Act, to give compensation if the premises were injuriously affected, a fact which it was the duty of the umpire to ascertain and determine. He has determined it, and awarded compensation in respect of the damage thereby sustained by the plaintiff, and I see nothing in the case to impeach the correctness of this award. I think, therefore, that the judgment of the Court of Exchequer Chamber must be reversed.

Lord Westbury entirely concurred with the view taken by the majority of the learned judges as to the admissibility of the evidence of the umpire, and as to the limits beyond which the right of the examining the umpire ought not to be carried; but upon the other point, as to the principle upon which the umpire was to assess the amount of compensation, he must confess, on this, as on several other occasions, he took a different view from that which was entertained by the majority of the learned judges and by his noble and learned friends. It would, however, be useless to discuss the question further, and he should, therefore, concur in the judgment about to be pronounced.

Lord Colonsay agreed in the view taken by Lord Chelmsford.

Lord Cairns, in giving his reasons for concurring in the judgment of the House, expressed the obligations their lordships were under to the learned judges who had been called in to assist them in determining this difficult and important question.

The judgment of the Court of Exchequer Chamber was reversed, and that of the Court of Exchequer, upholding the award, was confirmed.

## A SUGGESTION.

SIR,—If the employers would consent to an advance of wages from a fixed date not far distant, and ten hours' time, as at present, for those who like to work, and nine hours for the objectors, guaranteeing at the same time that no "sacking" will take place in consequence, and place notices on their works to this effect, I believe they would thoroughly take the wind out of the sails of the promoters of the nine-hours movement, thereby in the end saving themselves a great loss, and the men a deal of misery; for few are sanguine enough to think that present arrangements will be of long duration.

A. B.

## INTERFERING WITH CHIMNEY DRAUGHTS.

In the Margate County Court a case (Williamson v. Edwards) important to builders has been tried. Mr. Towne for plaintiff; Mr. Gibson for defendant.

In his opening statement, Mr. Towne said this was an action to recover 7*l.* by his client, a widow, residing in Addington-street, from the defendant, Mr. Edwards, a builder, carrying on an extensive business in Margate, for damage done to plaintiff's property. Mrs. Williamson is the owner of two houses in Addington-street, in one of which she resided herself, and which had existed there fifty years. Adjoining this property was a small house, belonging to Mr. Edwards, and this house had now been elevated to a story above Mrs. Williamson's houses, the consequence of which was that the smoke from these two houses refused to go up, and, in fact, the houses were rendered uninhabitable. When applied to in the matter, Mr. Edwards, through his solicitor, Mr. Gibson, replied that he could do as he liked with his own property, which he believed was to be the defence to the action. Now, defendant had a right to carry his house up, but he had no right to take away the light or air from a neighbour's house, nor to drive the smoke down the chimneys. Mr. Edwards had been called upon to carry plaintiff's chimneys up higher; and he refused. He had then been called upon for the amount, plaintiff having been compelled to do it; and Mr. Edwards refused.

His Honour: It is a well-known maxim that you may build up as high as you like, but you must do it in such a way as not to annoy your neighbour.

Mr. Gibson: My client, Mr. Edwards, says that he knows of no such custom here.

His Honour: I do not say the custom exists here; but it is in consonance with the usual maxim; a man must not do anything to the annoyance of his neighbour.

Mr. Gibson: But any such decision would be very serious, and would prevent Mr. Edwards or any one else from building. My objection is that no such action will lie. And another objection I shall raise is that the plaintiff ought to have proceeded by injunction, and this would have been her remedy.

His Honour: She might have had such remedy, but because she did not I do not know that that deprives her of any right to appeal to this Court afterwards. I may say at once that I have a strong opinion that the action will lie, and that if the nuisance is proved the plaintiff will be entitled to a verdict.

Mr. Hoggens, architect, called by Mr. Towne, stated that since he had been subpœnaed on this case he had taken a run through the town and had found out three cases where the owners of new or raised buildings had paid for the raising of adjoining chimneys.

Mr. Edwards: I do not think there is an instance in the town where it has been compulsory to raise adjoining properties.

His Honour: I must find for the plaintiff in this case; and the only question now is Mr. Gibson's objection, whether the action will lie, if it is not a deprivation of easement. I think it will.

Mr. Towne: Mr. Gibson talks about an injunction as our only remedy, but that is absurd.

His Honour: I do not generally give an opinion if I reserve judgment, but in this case my opinion is strongly in favour of the plaintiff.

Mr. Gibson pointed out to his Honour that Mr. Hoggens had not stated it was compulsory in those cases he had mentioned. The case then terminated.

## MR. T. C. EBDY *v.* REV. F. THOMPSON.

MR. T. OLIVER, who, in our report of this trial, was described as of Sunderland, instead of Newcastle-upon-Tyne, thinks our report makes it appear that he voluntarily stated that probably Mr. Street would have charged 200 guineas for such a report as the one in question; whereas, he continues, "I was asked the question in this form,—'Probably, if Mr. Street had prepared a similar report, he would have charged 200 guineas?' My reply was, 'I do not know.'"

## STONE MERCHANTS AND MASONS.

SIR,—I beg the favour of your inserting the following. I want some one interested as much as myself in the matter to explain why the stone-merchants of London should supply stone, ready worked for fixing, to builders, at a price that masons cannot compete with. The same merchants who thus treat the masons solicit and obtain their custom, and yet express surprise, after taking from them their only chance, at their inability to pay their accounts for stone. To obviate this, and show that such merchants can be done without, I would suggest that the mason should get his stone direct from the quarry, when possible, and thus save the profit he has now to pay the merchant. This would enable him to hold his own ground, and prove that a mason is not to be done without just yet.

A LOVER OF JUSTICE.

## COMPULSORY TAKING OF LANDS.

AN arbitration case, connected with the Leeds Waterworks (Gill and the Corporation of Leeds), is one of a series of arbitrations rendered necessary by the compulsory taking of lands by the Corporation of Leeds for the formation of their several reservoirs in the valley of the Washburn. In this case the lands taken were the property of Mr. Matthew Gill, of Blubberhouses, and are situated in the township of Fewston, where the upper reservoir for the supply of water to the town of Leeds is about to be constructed. The two lower reservoirs, now partly made, are situated at Swinsty, and the reference was to assess the amount due to Mr. Gill for 9a. 1r. 12p., taken from him under the powers of the Act. Mr. Crowther, surveyor, Huddersfield, was umpire, and Mr. Newsam, of the firm of Newsam & Sons, surveyors, Leeds, and Mr. J. D. Martin (Martin & Fenwick), Leeds, were arbitrators respectively for the claimant and the corporation. Mr. James Powell, land agent and surveyor, Harrogate, valued the compensation due to Mr. Gill for the lands taken and compulsory purchase at 1,381*l.* 1s.; and Mr. John Hanmam, surveyor and farm engineer, York, estimated the amount due for land at the same sum, but (including a mill-site and water-power, which he declared was available) the amount of compensation he fixed at 1,581*l.* 1s. Mr. Scott, land agent, Grantley, Ripon, valued the tenants' claims for land taken at 60*l.* 13s. 6d. Mr. Fenwick, surveyor and engineer, Leeds, and Mr. Horsfall, surveyor, Halifax, estimated the compensation due to the claimant at 675*l.* 17s. 4d., including the tenants' claims, as estimated by Mr. Wordsworth, valuer, Black Gates, Leeds. The umpire reserved his award.

## PURCHASE OF MORE SITES FOR NEW SCHOOLS BY THE SCHOOL-BOARD.

THE London School-Board, in addition to the several new schools which they have recently agreed to build, last week resolved to purchase, from the trustees, Ebenezer Chapel, in Shadwell, which covers an area of 9,660 square feet, for the purpose of erecting a new school for the Tower Hamlets division, to accommodate 1,000 children. The premises consist of a chapel, school-room, and two vestries, and the purchase money is 5,000*l.*

In the Greenwich division they have also agreed to provide further school accommodation, and for this purpose they have entered into arrangements for the purchase of a quarter of an acre of land situated in Brockley-road, Lower Sydenham, from Mr. Edward Saxton, of Cheapside, for 300*l.*

In the sub-division of Hackney the Board have decided to provide school accommodation for 2,000 children, and have agreed upon the purchase, from Mr. Charles Southby Shaw, of Hackney, of 6,500 square feet of land in Claremont-street, Bethnal-green, with four dwelling-houses and a large three-storied warehouse. The lease has seventy-three years to run, with ground-rents amounting to 17*l.* per annum, and the warehouses can be adapted for school purposes immediately, to accommodate 900 children. The purchase money is 3,500*l.*

The Board have also agreed to purchase between 8,000 ft. and 9,000 ft. of freehold land in Hammond-square, Hoxton, subject to the assignment to the Board of the Hoxton Ragged School House. On this site they propose to erect a new school in addition to the present Ragged School.

## ASSESSING TELEGRAPH WIRES.

PROCEEDINGS AGAINST THE POSTMASTER-GENERAL.

THE Marylebone Vestry have resolved to take proceedings against the Postmaster-General for the recovery of the rate assessed on the telegraph wires in their parish, which amounts to 500*l.* The Government have offered to pay 20*l.*, which was the amount at which the wires were assessed when the purchase from the companies took place, although they altogether deny their liability on the ground that the telegraphs belong to the Crown, and that the Crown is not liable for rates. The position of the Vestry, on the other hand, is that the Crown is liable, the section of the telegraphs Act stating that the Government shall be liable to pay local and municipal rates on all property to be purchased by them after the passing of the Act, provided such rate[illegible] be in excess of those for which the pr[illegible] properly assessible at the time of the [illegible] The Vestry contend that the wires, [illegible]ere not "properly" assessed at the time they were purchased by the Government, and counsel has advised proceedings, which will no doubt ultimately go to the Queen's Bench after being before the magistrates. At the meeting of the Vestry last week, when the proceedings were resolved upon, Alderman Sir David Salomons, M.P., stated that the Government repudiated all liability to pay rates upon property purchased by them, except such as the property was liable to at the time of the purchase. They refused to pay for any increased value, and this rate they had carried out with respect to the property they had purchased at Westminster and elsewhere.

## THE STRENGTH OF BUILDING MATERIALS.

ROYAL INSTITUTE [illegible] RCHITECTS.

SIR,—I shall be [illegible] allowing me to state in your c[illegible] discussion on Captain Seddon's [illegible] Strength of Building Materials, [illegible]ead at this Institute on the 22nd ult.,* has been adjourned until Monday evening, the 27th inst., at eight o'clock.

In connexion with the subject of that paper, Mr. David Kirkaldy has kindly promised to throw open his "Testing and Experimenting Works," at the Grove, Southwark-street, S.E., for the inspection of members of [illegible] Institute, who will be admitted on presenting [illegible] cards between twelve and four p.m. o[illegible] Saturday, the 25th inst.

CHA[illegible]LES L. EASTLAKE, Sec.

## REFORM OF THE METROPOLITAN BOARD OF WORKS.

AN influential meeting of noblemen and gentlemen, ratepayers of the metropolis, has been held at No. 1, Carleton-house-terrace, to consider the present constitution of the Metropolitan Board of Works. Col. Tomline, M.P., who was called to the chair, urged the desirability of sending a deputation to Mr. Bruce to impress upon the Government the necessity for an improved audit of the accounts and a reconstitution of the Board, so as to make it a direct representation of the ratepayers. Mr. Shaen suggested the expediency of treating the two questions separately.

Major Lyon moved that a deputation should wait on the Home Secretary, to ask him to bring in a Bill to give an appeal from the auditor's decisions.

The motion having been seconded by Lord Fitzroy, Mr. W. H. Smith, M.P., warned the meeting not to expect an early reform in the local government of the metropolis; it could only be effected by putting a pressure upon the Minister, and until that was done the question would remain shelved. Any proposal to give direct representation, which he should be glad

* At this meeting a report on Professional Charges was accepted, and will be submitted for discussion and approval at the approaching Conference.—ED.

to see, would always be met with the excuse that the Home Office had in preparation a general measure of municipal reform for the whole metropolis.

Mr. Julian Goldsmid, M.P., said nevertheless, if the Government made no sign, he should next session endeavour to get a Bill passed to transfer the election from the vestries to the ratepayers.

The motion was carried unanimously, but the meeting negatived a second proposal that the right hon. gentleman should have his attention called to direct representation, and be invited to take up that part of the question also.

At the request of Dr. Stallard, it was agreed to solicit the vestries to join in the deputation.

## CONFERENCE OF ARCHITECTS.

A COMMITTEE to arrange the proceedings at the approaching conference has been appointed by the Institute, and at its first meeting, held on Tuesday last, did good work. As we do not yet know whether secresy or publicity is to be the order of the day, we content ourselves with saying that the first meeting will probably be held on the evening of Monday, the 10th of June; other meetings on the 11th, 12th, and 13th; and that a dinner on Friday, the 14th, will close the proceedings, as on the last occasion.

## GLAZED SURFACE.

SIR,—I want to know a substitute for *glazed bricks* for lining walls, that can be had at a reasonable cost, glazed bricks being now very high in price, and exceedingly difficult to procure for immediate delivery.

Wall tiles are rarely true, and generally dear. Most of the cements for plastering seem too liable to chip under hard usage. What I want is a hard glazed surface, at a small cost.

AN ARCHITECT.

## CHURCHES AND OTHER BUILDINGS STRUCK BY LIGHTNING.

LAST year we pointed attention to the fact that lightning was then more destructive than it had been since the year before the great earthquake. Various physical commotions of serious import have occurred since that,—such as the earthquakes in California and at Antioch, as well as in Upper Asia, in Australia, and in Iceland. The commotion of Vesuvius, too, has been notable; and still we find hurricanes, as at Zanzibar and Madras, and the lightning in this country, more destructive than usual. The parish church of Rainham, East Kent, has been struck, as also the parish church of Mashbury, Essex, which has been set on fire. The spire and belfry, which were of wood, soon succumbed to the flames, which, fanned by a strong wind, travelled eastward along the roof of the nave, feeding on the timbers between the plastering and the tiles. The fire was beaten back, so as to preserve the church. The roof of the nave is destroyed, and some of the fittings damaged by falling *débris*, the damage being estimated at about 200*l*. At Bampton the lightning has struck the spire of the parish church, where five iron clamps are fixed. The spire is about 180 ft. high. The force displaced ten courses of stonework on the northern side, or about 15 ft. It also split the spire on the south side. It apparently passed over the bells, destroying the wires connecting the chimes with the clock. It is supposed about 40 ft. will have to be rebuilt. Several trees in the neighbourhood were also struck. Houses at various places, as at Tamworth and at Deptford, have also been struck by lightning.

## UTILISATION OF ST. PAUL'S.

SIR,—I presume that the authorities of St. Paul's have now discovered that it is impossible to utilise the whole of the church at one service. Two Sundays ago we had the Lord Mayor and the Judges present. The sermon was preached from the pulpit under the dome, where the crowd of worshippers were. The Lord Mayor and the Judges occupied their usual seats in the choir. The seats beyond that occupied by the Lord Mayor were vacant. Whether he or the Judges could hear the sermon, separated as they were from the rest of the congregation, I very much doubt. It would be well if they could be asked the question. I sat midway between them and the preacher, and distinct as Canon Liddon is in his utterance, and clear and audible as is his voice, I with difficulty could follow him, and frequently lost what he said. But it was painful to see the Lord Mayor and the other authorities of the City, with her Majesty's Judges, put out, as it were, in the cold,—thrust away into the choir, and separated from the rest of the congregation.

The great mistake of the day is "monster" everything. Man is but a pigmy being. His powers of speaking and of listening are limited. If there is no limit to man's power of speaking and listening, let one monster cathedral be built for the whole metropolis, and do away with all the churches. Some of the churches built not long ago prove the folly of such a vain attempt. Very large churches no ordinary voice can fill. Take, for instance, St. John's, Waterloo-road. The object of the architect lately called in there has been to curtail its dimensions, and bring all within the hearing of the preacher.

Mr. Street has advocated, and, I think, rightly, that the choir at St. Paul's ought to be separated from the nave; in other words, that there should be two places of worship, one for the ordinary and another for the larger congregations. This cannot be done till the organ is brought back to its old place, or nearly so, and the choir screened off from the nave.

The distance of the altar-table from the congregation assembled under the dome, and the long avenue of nakedness between the one and the other, has a chilling and deterring effect. This is evidenced by the smallness of the number of the communicants. I assisted two or three Sundays ago, when we had only seven: last Sunday, I am told, there were only three. Nothing more need be said, to show that the attempt to utilise the whole of the church at one service is a mistake.

In conclusion, I beg to ask, for what purpose the several handsome presents of communion-plate have been made, if they are not to be placed on the altar?

JAMES LUPTON, St. Paul's Cathedral.

## THE LITERARY FUND DINNER.

AT the recent dinner, so admirably presided over by H.M. the King of the Belgians, the numbers present were 433 gentlemen, and 340 ladies in the galleries; and the amount actually subscribed, including H.M. the Queen's annual donation, was over 3,100*l*., an amount, we believe, unexampled in the annals of the Society. The King's speeches were excellent; Mr. Disraeli's perfect in its way; Lord Stanhope and Lord Houghton particularly happy; the music singularly good; in fact, every one concerned deserves praise except the proprietor of St. James's Hall, who gave a very unsatisfactory dinner, shamefully ill-served. We propose to speak seriously before long as to the present condition of London in respect of public dinners, and try if anything can be done to improve it.

## CHURCH-BUILDING NEWS.

*Leicester.*—St. Mark's Church has been consecrated. The building of a church in the district at the lower end of Belgrave-gate formed part of the plan of the Church Extension Society; but Mr. and Miss Herrick took the whole responsibility upon themselves, and the church now erected on the north of Foundry-square is more extensive in plan, and ornate and elaborate in its details, than it would otherwise have been. The site is of irregular form, and the building and its adjuncts have been so designed as to take advantage of its peculiarities with the least possible sacrifice of space. The church consists of nave, chancel, north and south aisles, organ-chamber, and tower at the south-east corner. The nave is 31 ft. 6 in. wide, and 62 ft. long, and 53 ft. high to the ceiling; the chancel is of the same width and height, and 37 ft. 6 in. long, terminating in a semicircular apse. The north aisle is 14 ft. 6 in. wide, and, continuing past the north arch of the chancel, terminates also in an apse, the eastern portion being screened off for a vestry. The south aisle is in three compartments, with gabled roofs, each extending beyond the other to meet the sloping line of the boundary-line of the site; the western bay being 12 ft. 6 in. deep, and the eastern one 25 ft. deep. The tower, which is 25 ft. square, projects still further south, giving thereby, between it and the chancel, an organ-chamber, of ample dimensions, clear both of chancel and aisle, but open by arches to both. At the western end of the church is a vestibule, fitting up to the boundary on that side, having a width of 14 ft. at the southern end, and diminishing to the width of the doorway at the northern termination. The vestibule, which is external to the main building, affords a screen to the three western doors, two of which are hung to open outwards, and is entered from a porch, with double external archway, and double doors next the vestibule, also opening outwards. This provision is made for escape, in case of any sudden alarm. The tower has both internal and external double doors, giving access to the eastern end of the south aisle. The nave is divided into three compartments by three stone arches on each side, supported on pillars having shafts of granite from the Shap Quarries, and foliated capitals and moulded bases of Ketton stone. It is lighted at the western end by a large window of five plain arched lights, the central one rising higher than those at the side. The north aisle is lighted, next the nave, by two windows, each of coupled plain lights, and one of three lights; and next the chancel by a lofty window of three lights. Each compartment of the south aisle has a large three-light window. The chancel has, on the north side, within a larger arch, a double arch, supported in the middle by coupled pillars of Shap granite. Through this arch light is admitted to the chancel from a large north window. Opposite to it is the organ-chamber, which is vaulted with brick, the arch next the chancel being, in the centre 35 ft. high. The apse is divided into seven compartments, by corbel shafts of marble, starting from the base of the lower arcade, and supporting the main ribs of the roof on carved capitals of stone. Between these, in the uppermost stage, is a range of windows, each of a single traceried light, enriched by shafted angles as in the clearstory of the nave. These windows, which range with those of the nave clearstory, are filled with stained glass. Below the windows, the sills of which are 26 ft. above the floor of the nave, there is a series of seven large cusped arches, each 10 ft. high, designed for decorative enrichment. All the seats, both in nave and chancel, are of oak, and the prayer-desk and lectern are of the same material. In the chancel fittings some carving is introduced. The walls are built of slate-stone, of fine colour, obtained from Mr. Herrick's quarries, near Woodhouse, with quoins of the same material; but all dressings, windows, doorways, &c., are of Doulting stone. They are lined internally with red brick, intermixed with Doulting and Derbyshire stone. The roof is framed of fir, covered with Swithland slate. All the eaves, gutters, and upper pipes are of lead. The exterior of the church, excepting the apse and the upper portion of the tower, is of simple character throughout. The spire is wholly of Doulting stone, except tracery-bands of Derbyshire red stone. The bell-chamber windows are all open, the bells resting on a floor covered with lead within the tower. The height of the tower to the parapet is about 80 ft.; of the spire to the top of the finial, 168 ft. The tower contains a peal of eight bells. The seven windows of the apse have been filled with the following subjects, executed in painted glass by Messrs. Ward & Hughes, of London:—The Angel announcing the Nativity to the Shepherds; the Adoration by the Wise Men; the Baptism; the Crucifixion; the Angel at the Tomb; the Sea of Tiberias; and the Ascension. Beneath, in the three centre compartments, is a fresco of the Last Supper, executed by Mr. Allen. On the south side of the chancel is the organ-chamber, in which is placed an organ, by Messrs. Hill & Son, of London. The roof and other parts of the church have been decorated by Messrs. Heaton, Butler, & Payne, of Covent Garden. Those of the ceiling of the apse are subjects representing the canticle, "Benedicite omnia opera." The seats are of oak, and are calculated to accommodate nearly 700 persons. The lighting is effected by a line of gas-jets under the clearstory windows, similar to that in St. Paul's, and executed by Mr. Coleman, Cheapside. The architect was Mr. Ewan Christian, of London; and the whole work has been carried out by the builders, Messrs. Osborne, Brothers, under the clerk of the works, Mr. James Nichols, of London. The heating apparatus was got from Haden & Son, Trowbridge. The plumbing and glazing has been done by Mr. R. W. Widdowson; the altar-railing and ornamental gaswork has been supplied by Mr. Skidmore, of Meriden; and the musical peal of eight bells, by Messrs. Taylor, of Loughborough. The diameter across the mouth of the largest bell is 15½ in.

## SCHOOL-BUILDING NEWS.

*Haresfield.*—The new national school has been opened. The building has been erected from designs furnished by Mr. J. D. T. Niblett, who is the donor, with the exception of 40*l.* granted by the Diocesan Association. The style of architecture is Gothic. The school-room is 42 ft. long by 16 ft. broad, part of the space being taken up by the class-room, which is 16 ft. in length. The roof is open-timbered, and composed of pitch pine. The exterior materials consist of red, white, and blue bricks, with stone dressings. The roof is slated with red and blue Broseley tiles. Beneath the bell-turret are the words, "Non semper alteri," with the figure of a hare, and the word "field" written above it. On the capstone of the porch the emblems of the three Christian graces (Faith, Hope, and Charity) are inscribed. Over the door inside the porch is a figure of a tortoise cut in stone, with the Latin inscription on either side and above *Per se vera, Persevera, Per severa*, and on either side of the porch are passages from Holy Writ. The buildings, outbuildings, and playground occupy over half an acre. The builder is Mr. A. Bridgman, of Painswick, who has lately completed several extensive buildings on the squire's estate.

*Long Sutton.*—A new school is being built at Long Sutton, near Langport, in order to meet the requirements of the Education Act, without electing a School Board. The Duke of Devonshire gives the land, and is a liberal subscriber to the funds. The farmers do the hauling free.

*Siddall.*—A new school is about to be built, by Messrs. John Holdsworth & Co., on a site a little to the southward of the temporary iron church, at Siddall. The working drawings are being prepared. The schools will accommodate some 320 children, and are arranged to form three sides of a quadrangle. The centre portion is allotted to the girls, and the wings to the boys and infants, with distinct entrances, lobbies, lavatories, and class-rooms. Open fire-places are put in each room, and in addition to these a heating apparatus is intended to be put up. Ventilation has been attended to. Owing to the steep gradient of the site, that portion which would otherwise have been useless ground is converted into covered play-rooms. This has apparently been taken advantage of by Mr. Swindon Barber, the architect, for making the elevation, which commands the valley, of the most importance. The arcade under the boys' and girls' schools, with intervening buttresses, combined with the grouping of the circular turreted staircase in one corner of the quadrangle, are features which are said to suit the situation chosen for the building. Messrs. Holdsworth intend to build another and smaller school at Salterhebble, a site for which has already been purchased. Considerable outlay will be required also in this instance, in building a retaining-wall and levelling up the ground for building purposes.

*Rowledge (Surrey).*—The school just erected to meet the requirements of the newly-constituted and improving district of St. James's, Rowledge, has been opened. The building will accommodate 126 children, providing for a population of 250 persons within the civil parish of Farnham, as well as for sections of the old parishes of Binsted and Frensham. It is built from designs by Mr. Wonnacott, by Mr. A. Shrubb, builder, Rowledge.

*Sherborne.*—The memorial stone of a new Sunday School, in connexion with the Wesleyan Chapel in this town, has been laid with considerable ceremony. The plans were supplied by Mr. Lauder, architect, Barnstaple. The contract for the building was taken at 1,419*l.* The site of the new school, &c., joins the chapel premises in a transeptal form, to a depth of 64 ft., and has a frontage of 90 ft. in the Abbey-road. The buildings are to comprise a school-room, 58 ft. long by 41 ft. wide; a board-room (for district and other meetings), 27 ft. by 20 ft.; two class-rooms, 18 ft. by 15 ft.; a library-recess, 14 ft. by 7 ft.; and separate yards and offices for boys and girls. Arcaded porches on each side are to form entrances to the large room from the Abbey-road, and porches will also be provided from the chapel premises, to give convenient access from the series of class-rooms into which the present school-room beneath the chapel is to be altered. The school-room is to be 32 ft. high to the ceiling, and will be lighted by four-light lancet windows in each gable, and six twin lancet lights on both sides, springing from double-moulded strings running round the room, with encaustic tile bands 8 ft. from the floor. The ceiling is to be boarded and fitted (octagonal sided), divided into panels by the top chamfered roof timbers; and a pierced cornice will run round the room at the springing of the ceiling. Ventilation is to be secured by section-troughs and flues above the ceiling, and fresh-air inlets in the ground-floor. The latter will also be connected with the apparatus in the basement for warming the buildings. All the walls are to be lined with dado, 3 ft. 6 in. from the floor. The board-room is also to be lofty, and will be entered from the chapel side, while the entrance to the class-rooms will be from the school. The elevations are to be in local stone masonry, with Ham-hill dressings. The main features of the frontage will be the large four-light window, with blind arcading underneath, and the arcaded entrances on each side, with ornamental iron gates. The style of the building is to be Early English or First-pointed Gothic. The treatment will be simple. The work is to be carried out by Mr. T. Farrall, builder and surveyor, Sherborne, from plans prepared by Mr. Alexander Lauder, architect, Barnstaple, who is at present engaged on several metropolitan buildings, and whose designs have been adopted for various buildings in the neighbourhood, amongst which are the Wesleyan Chapel at Yeovil and the Chapel and Schools at Milborne Port.

*North Shields.*—The new schools in connexion with Christ Church, North Shields, have been formally opened. The site adjoins the parish church-yard on the east, and was given by the Duke of Northumberland. It comprises an area of three-quarters of an acre. The north end is reserved as a site for a teachers' house. The buildings are arranged so as to face on to a new street running northwards from the Tynemouth-road (which is at present included in the playground of the schools). In plan the group forms a cross. The centre limb is the infant school, and measures 54 ft. by 25 ft. internally, and 19 ft. high to the ceiling. On each side of this are the entrance lobbies, giving access on the south side to the boys' school, and on the north, to the girls' and infants' schools. The boys' and girls' schools are 52·4 ft. by 20 ft. internally, and 18 ft. high, with class-rooms, 18 ft. by 15 ft. projecting from the east front. Accommodation is thus provided for 470 children. The materials employed are red bricks, and for arches bands of black bricks, with stone mullion and other dressings to the windows, &c. The walls are built hollow, as a security against damp. Internally the part below the windows is faced with glazed fire-bricks, the remainder being plastered. The woodwork of the principals of the roofs is visible internally. The windows are glazed with Hartley's quarry glass, and each of the side windows has a metal casement, for ventilation. All the woodwork is simply varnished. In the infant school are two large galleries. The contract for the entire building was let to Mr. R. Bolton for 2,065*l.* Mr. F. R. N. Haswell, of North Shields, is the architect.

*Bristol.*—The corner-stone of the new Schools in the parish of St. Simon, Baptist Mills, has been laid by the Mayor of Bristol (Mr. W. Proctor Baker). The building is situate in the rear of the church. It will comprise a girls' schoolroom, 60 ft. by 21 ft.: a girls' class-room, 21 ft. by 16 ft.; an infants' schoolroom, 60 ft. by 27 ft.; and an infants' class-room, 22 ft. by 20 ft. The structure is to be of brick, with free-stone dressings. The style will be unpretending. The roof is to be tiled, and the rooms will be lighted with a number of circular-headed double and treble windows. The main entrance will face towards Claremont-street and Pennywell-road. A piece of ground contiguous to that upon which the school is being built has been secured for a mistress's residence. The building is being erected by Mr. J. P. Stephens, from designs by Messrs. Medland & Son, architects, Gloucester. It is intended to accommodate 250 infants, and 200 girls. The contract price is 1,244*l.*, and the site has cost 460*l.*

*Hoby (Leicestershire).*—The new school here has been opened, and is now in daily use. The building, which is Gothic in character, is of red brick and white stone dressings, and comprises two rooms, which are capable of being thrown into one, and forming a large room for parish meetings. There are ante-rooms, with lavatories and out-offices. Both school-rooms have open-timbered roofs, and the walls inside are of pressed brick, painted. The schools are warmed by open fire-places, and are well ventilated. The work has been well carried out by Mr. Whail, builder, of Frisby, under the superintendence of Mr. R. W. Johnson, architect, of Melton Mowbray and Kettering.

## FROM SCOTLAND.

*The Scott Monument at Edinburgh.*—The committee of subscribers have ordered sixteen statues for the niches in the monument from the sculptors formerly selected, who have agreed to furnish them, executed in a satisfactory manner, for 50*l.* each, the committee furnishing the stone and fixing the figures in their places. The following is the arrangement:—The statues of Jeanie Deans, Laird o'Dumbiedykes, Amy Robsart, and Leicester, by William Brodie, R.S.A.; Flora M'Ivor, Baron Bradwardine, Glee Maiden, and Hal-o'-the-Wynd, by John Hutchison, R.S.A., Rebecca and Friar Tuck, by Clark Stanton A.R.S.A.; Magnus Troil and Minna, or Brenda, by Mrs. D. O. Hill; Queen Mary and Halbert Glendinning, by D. W. Stevenson; and Diana Vernon and Bailie Nicol Jarvie, by Mr. G. A. Lawson. Thirty statues are required to complete the monument, which, at 60*l.* each, including stone and facing, amounts to 1,800*l.*

*Renfrew.*—The new municipal buildings of Renfrew are making progress in their construction. The style of architecture is a combination of the French Gothic with the old Scotch Baronial. In addition to the council chambers, there will be superintendent's and witnesses' rooms, the town-clerk's public and private rooms, with police-office, cells, and a public hall capable of accommodating upwards of 800 people, besides ante-rooms and retiring-rooms for ladies and gentlemen. There will be a town clock with four dials, each 7 ft. in diameter, and a balcony, which may be adapted for hustings. The tower in connexion with the buildings will be upwards of 100 ft. in height.

*Elgin.*—New Roman Catholic Schools here have been opened. They are built on the east side of the chapel, and are composed of two distinct and separate apartments, with different entrances, the front one being from Institution-road, and the back one from Abbey-street. The front is in a line with the gable of the chapel, and the architecture is in keeping with that of the church. There is a large room in front, and another stretching backwards for nearly 40 ft., giving ample accommodation to upwards of 150 children. The whole internal arrangement has been carried out on the most modern and approved principles, and with an eye to economy, in placing and fixing the desks and other furniture. The total cost, including enclosing walls, gates, and railings, is about 500*l.* Mr. Melvin, of Elgin, was the architect. The contractors were:—Messrs. J. Young, mason; W. Hay, carpenter; Bain & Morrison, slaters; D. Simpson, plasterer; J. Gordon, plumber; and J. Kintrae, glazier; and for railing and gates, J. Ramsay, Findhorn.

*Glasgow.*—A new church is now finished, and was lately opened, at Whiteinch, near Glasgow, for the accommodation of families in connexion with the Church of Scotland, in that rapidly-rising locality. The building, which is in the Pointed or Gothic style of architecture, contains in the area 555 sittings; and when the galleries are added it will accommodate 800 seat-holders. The roof is open-timbered, stained and varnished; and coloured ornamentation has been sparingly introduced. Externally, the front is of an ornamental character, the side walls are divided by single-light windows and massive buttresses, and behind there is a circular window; the keystones of all the windows and the main doorway are carved with incised work, which is to be filled in with chocolate-coloured cement. The gable is surmounted by a bell-turret and spire, terminating with a metal cross. At the angles are square pinnacled buttresses, terminating with iron finials. The architect was Mr. G. W. O'Donoghue, of Glasgow and London.

*Arbroath.*—The parish church of St. Vigean, near Arbroath, has just undergone a process of restoration, and been re-opened for public worship. The edifice is one of the earliest in Scotland still in use in public worship. It is known among antiquaries by its sculptured stones, supposed to be of a sepulchral character, and the latest date assigned to which is the end of the tenth or the beginning of the eleventh century. The church is believed to have existed long anterior to that date. The Bishop of Brechin, in his recently-published work on the Scottish saints, has identified St. Vigean with St. Fechin of Fohbar, in Ireland, who died A.D. 664. The sepulchral monuments belonging to it are unusually numerous, and prove it to have been a religious site of the first importance in the district. During the progress of the works connected with the recent restoration,

stones with finely-executed mouldings of the purest Norman were recovered from a fifteenth-century wall, in which they had been used as rubble. Numerous ancient crosses and other stones were discovered.

## Books Received.

*Atchley & Co.'s Timber Merchant's Guide.* By W. RICHARDSON, Timber Broker. London: Sprigg, Atchley, & Co., Great Russell-street.

ON the faith, of course, that its numerous tables are accurate, this is a very useful volume for building contractors, surveyors, builders, and all other trades connected with building. It contains valuable tables for all purposes connected with the trade; marks of wood; essay on the strength of timber; and remarks on the growth of timber.

## Miscellanea.

**The Finsbury Prebend Estate.**—In the House of Commons on the 2nd inst., Sir T. Acland stood up to defend the dealings of the Ecclesiastical Commissioners with the Finsbury Prebend Estate; or, rather, to deny emphatically the truth and justice of the allegations which had been made concerning them. Under these circumstances, says the *Times*, we thought it desirable to ascertain the condition of the estate by actual inspection, and the result has been to confirm at all points the correctness of the Medical Officer's report. A few filthy and dilapidated hovels, although now closed and condemned, are still standing to bear silent testimony to the kind of habitations which the Commissioners have allowed to exist since they came into possession more than four years ago. . . . . With regard to new buildings, they are precisely such as Dr. Sutton has described. Not of any extraordinary height, they are placed so near each other that the intervening roadway becomes a mere alley, and this alley is often serpentine or winding, or it has no direct outlet, so that its air remains unchanged. The buildings themselves are often workshops. They are built back to back, with no possibility of ventilation. Many such buildings are completed and occupied: others are in course of construction. In many closets were so placed as to occasion an insufferable nuisance; for the removal of which the sanitary authorities have been compelled to intervene. Upon the whole it seems plain that the Ecclesiastical Commissioners have done nothing which was not strictly within their rights, but they have failed to show either the intelligence or the public spirit which might be fairly expected from trustees for the public.

**Tramway Car Windows.**—In the Court of Common Pleas, Miss Wesley, sister of Dr. Wesley, the organist at Gloucester Cathedral, brought an action against the North London Tramway Company, to recover compensation for an injury received in one of their cars. The plaintiff had opened up a window, and had placed her hand upon the ledge, when the window fell, and hurt one of the fingers of her right hand, thereby seriously interfering with her profession as a teacher of music. The company contended that the accident was attributable to the plaintiff's negligence, but the jury awarded her 100*l.* damages. The windows in question, the writer of this happens to know, are dangerous traps for fingers. They lift up instead of being pushed down, in opening, and are intended to be caught by a spring, but are often so stiff that they cannot be lifted high enough, and down they come of a sudden upon a too convenient ledge for hands or fingers. The cars have plenty of ventilation above and at the end: why not fix these many trap windows (twenty in every car) altogether, and so end all danger and all squabbles as to them. Selfish persons, for their own exclusive delectation, open them, at the risk of rheumatic headaches to six or eight other persons, who often thus get colds without knowing how, from the continual strong draught which the advance of the car pours upon their heads and shoulders, through these open windows.

**Works in the International Exhibition.** The sideboard in the International Exhibition mentioned in our first notice (p. 339, *ante*) as being from the design of Mr. Tarver, was manufactured and exhibited by Messrs. Morant, Boyd, & Blanford, of New Bond-street. It is an excellent piece of workmanship.

**Turning on the Water at Kidderminster.** The memorial stone of the engine-house of the Kidderminster waterworks has been laid, and the water temporarily turned on to test the works. The whole of the works when completed will cost the ratepayers something short of 1*l.* per head. There are 24,000 inhabitants, and the total cost of the works will not amount to more than 20,000*l.* Mr. Fairbank is the engineer, and Mr. Hilton the contractor. The reservoir is 200 ft. square by 12 ft. deep, and is estimated to hold 3,000,000 gallons of water. It was erected by Mr. Hilton, under the personal superintendence of his manager, Mr. Vale. Since then, Mr. Vale has become partner, and the new engine and boiler-house will be erected by the new firm. The engine-house, when erected, will be 90 ft. by 50 ft., and will be of the best red brick, with red and blue dressings. The chimney will be of white brick, and will cost in all 1,280*l.* The engine and boiler will be supplied by Messrs. Clayton & Co., of Preston. The well is now completed, and is in depth 150 ft., and its diameter is 8 ft. in the clear.

**Kensington Church.**—On the 14th the new parish church of St. Mary Abbots, Kensington, was formally consecrated by the Bishop of London, in the presence of a large number of the metropolitan clergy and laity. It is Geometric in style, and has been built under the hands of Mr. G. Gilbert Scott. It consists of a nave and chancel, each with side aisles, and, in addition, there are a second aisle to the chancel on the north side, and two transept-like projections from the aisles, north and south, thus increasing the width of the building towards the east end, where the tower and spire will eventually rise on the north side of the east window. It will accommodate about 1,600 or 1,700 persons, all on the ground floor, and it has no galleries. The seats are low and open, the pews having been abolished, and a certain portion of the seats is free. The cost of the building thus far may be set down as standing at about 24,000*l.*, towards which a considerable amount is still wanting. A view of the exterior and plan of this fine Church will be found in an earlier volume of the *Builder*.

**Kent House Estate, Rutland-gate.**—With reference to a paragraph in our last, mentioning the sale of part of this estate in the Kensington-road for the erection of residences, Mr. Sang wishes it made clear that a considerable portion of it still remains for sale. It will give some idea of the rise that has taken place of late years in the value of land in this neighbourhood when we mention that for a front plot of 5,580 superficial feet, the price asked is 18,000*l.* Lady Ashburton gave this amount for a similar plot to Mr. Mitchell Henry, M.P., the then proprietor. Another front plot, situated between Lady Ashburton's and the first mentioned, and containing 5,619 superficial feet, is priced at 17,000*l.*

**The Stratford-on-Avon Museum.** — A book-case made of old oak timber, found in Shakspeare's House, and carved by Mr. John Marshall, has been placed in the upper room of the Stratford Museum, where it is ready to receive the valuable collection of Shakspearian books, comprising about 300 volumes, liberally presented by Mr. Halliwell-Phillipps. This collection has arrived at the birthplace, and is temporarily deposited in the Record-room, but it will shortly be arranged in the book-case. A main feature in it consists in voluminous unpublished annotations on the text of Shakspeare, illustrated by many thousand cuttings from old black-letter books, as well as by numerous early engravings. The collection will not be thrown absolutely open to the public during the lifetime of the donor, but permission to consult it for special objects will be freely granted.

**Street Watering.**—The Westminster District Board has accepted the tender of Messrs. Braby & Son for supplying four water-carts with springs, and fitted with their improved distributor pipes, which enable the flow of water to be adapted to the width of the streets and to the varying degree of moisture of the road, at the sum of 28*l.* each.

**Position of Public Lamps.**—The Westminster District Board of Works have declined to undertake the lighting of sixteen new lamps which have been erected in front of the Albert Mansions in Victoria-street in lieu of the ordinary lamps, considering that the proper position for public lamps in such a thoroughfare is the edge of the kerb.

**Land Sale, Bristol.**—Last week the Hampton Court estate was offered in lots, and realised satisfactory prices. Lot 1, a piece of freehold pasture land, near the Ashton Vale Iron Works, containing 1 a. 2 r. 2 p., was sold for 185*l.* Lot 2, a close of freehold pasture land, containing 1 a. 2 r. 24 p., was bought at 290*l.* Lot 3, a similar close of land, containing 2 a. 2 r. 4 p., was sold for 390*l.* Lot 4, another close of pasture land, containing 4 a. 0 r. 20 p., was knocked down for 900*l.* Lots 5 and 6, two closes of arable grazing land, containing together 10 a. 2 r. 18 p., were sold for 935*l.* Lots 7 and 8, two plots of building land, having frontage in West-street and Back-lane, Bedminster, containing 3 r. 10 p., were sold to Mr. H. B. O'Donoghue for 1,000*l.* Lots 11, 12, 13, and 14, other plots of building land, containing together 1 a. 2 r. 39 p., were sold to Mr. H. B. O'Donoghue, for 1,450*l.*

**The New Market Buildings in the City.** The extensive new premises, consisting chiefly of large suites of offices, which have just been erected in Mark-lane and Mincing-lane, and now fast becoming occupied, have been named Market-buildings. The new premises form a prominent feature in the neighbourhood. The Mark-lane elevation is built of red brick, with stone facings around the spacious windows in the elevation, the ground-floor being of stone, with Tuscan pillars. The Mincing-lane elevation is much in the same style of architecture as Mark-lane, but differs in appearance from the latter in so far as white bricks have been used instead of red.

**The Right Thing must be Done the Right Way.**—A short time ago a clerk in the Admiralty, named Roffery, submitted to the Admiralty some suggestions as to iron shipbuilding. Though it is admitted that these suggestions were of a valuable character, Mr. Roffery has been suspended for twenty-one days, he having offended official dignity by writing direct to the Admiralty, instead of forwarding his communication through the head of his department, Captain Chamberlain. Nelson, if we remember rightly, was once reprimanded, after winning a battle, because he had fought it against orders. It cannot be helped. Authority *must* be maintained.

**Harbours at Jersey.**—The foundation-stones of two new harbours were laid on the north side of the island of Jersey last week, the one being at Bonne Nuit, and the other at Grève-de-Lecq, both of which places are extensive fishing stations, which hitherto have been without the least shelter for the numerous craft that frequent them. In addition to the primary object of its construction it is intended to utilise the harbour at Grève-de-Lecq for the shipment of the Mont Mado granite, which is found in that part of the island.

**Llynvi, Tondu, and Ogmore Coal and Iron Company, Limited.**—This company has been formed for the purpose of acquiring three properties, in South Wales, now in active operation, which together will form one of the most extensive coal and iron works in the kingdom. The capital of the company will be 550,000*l.*, partly in 7,000 shares of 50*l.* each, making 350,000*l.*, and the remainder taken by the vendors.

**Explosion of Dynamite.**—An alarming explosion has taken place on Durdham Down, Clifton, where some railway works are in progress. About 4 lb. of dynamite in a chest exploded. Fifty men were in a shed, about twenty yards from the chest, when it occurred, and the explosion broke innumerable windows in the neighbourhood, and was heard in the remotest parts of Clifton; but no one was injured, though many men were blown off their seats.

**Dinner to Workmen at Leicester.**—The completion of St. Mark's Church has been celebrated by a dinner given to the workmen by Mr. W. P. Herrick, at whose expense the church has been erected. The dinner took place at the George Hotel. After the cloth had been drawn the Rev. Canon Burfield was elected to the chair, and was supported by Mr. A. Ellis, Mr. Osborne, Mr. Nichol (clerk of the works), Mr. Walter Lindley (foreman), J. Cox, J. Oneby, and several others connected with the firm.

**Cottage Hospital Movement.**—It is proposed to erect a cottage hospital at Chippenham, to promote which an influential meeting has just been held, when appropriate resolutions were passed, and a committee appointed to promote the object in view.

**A Skeleton in Every House.**—*Fun* says,—"Our excellent contemporary the *Builder* contains an advertisement which, compared with sensational tales as a rule, may be described as several stories high:—'Two skeletons in Hampshire, 20 miles beyond Southampton, are required to be immediately completed.' At first, we were inclined to think that the services of an able anatomist were required by some modern Frankenstein; but our own residence—we live in a modern villa—soon reminded us of the fact that unfinished houses are often spoken of as skeletons, and that many of them retain their claim to that title even after they are supposed to be finished, for the wind blows through them as if they were mere bony structures."

**The Congregational Memorial Hall.**—The Memorial Hall, of which we gave a view in our last, came into existence from a desire expressed in many quarters to celebrate the 29th of August, 1662, when more than 2,000 ministers of the Church of England were ejected from their charges because they could not conscientiously subscribe to the Act of Uniformity. Other objects were contemplated, and a fund of 250,000*l.* was raised. In the first instance a site was found in New Earl-street. Ultimately the site was disposed of to the Metropolitan District Railway, and the present site, a part of that of the old Fleet Prison, was procured, to the extent of 9,000 ft., for the freehold of which 28,000*l.* were paid.

**Raffaelle's Cartoons.**—With a view to preserve accurate copies of the cartoons of Raffaelle, the Lords of the Committee of Council on Education, acting through a committee, propose to select nine artists to make preliminary studies of given parts of three of the cartoons. Artists will first be required to complete an accurate copy either in water-colours, tempera, or oil, of a photograph, full size, of a head selected from the Beautiful Gate. These will be sent in to the Secretary of the Science and Art Department by the 31st of July, 1872. From the candidates so competing, nine may be selected to make accurate coloured copies from the cartoons themselves of portions set out by the committee as a final test.

**Report on Works in the City.**—The usual Report, for 1871, of Mr. William Haywood, Engineer and Surveyor to the City Sewers Commission, has been issued in a printed form. In respect to the proposed widening of the public way on the western side of St. Paul's Churchyard, it states, the negotiations had not materially advanced at the end of the year. The inhabitants on the lines raised objections, and so did the Cathedral authorities on behalf of those going to the cathedral, and the matter at the end of last year remained at that stage. The experiments with asphalte paving were being continued; wood paving was also again in hand in an improved form.

**The Idiot Asylum at Knowle.** — The foundation stone of the Midland Counties Middle-class Idiot Asylum has been laid at Knowle, a village midway between Birmingham and Warwick. The ceremonial took place with full Masonic honours. The asylum, when finished, will cost 20,000*l.*, but a portion only will now be erected, affording accommodation for twenty patients of each sex. Lord Leigh, in laying the foundation stone, used the identical mallet with which Charles II. laid the foundation stone of St. Paul's Cathedral.

**The Protection of Children under the Factory Act.**—At Chorley, Mr. J. Quin, a manufacturer of india-rubber, has been summoned by the Government Inspector for a breach of the Factory Act. A youth named Salisbury had been engaged in the mill, and on the 23rd and 24th of April he worked thirty-two hours "at a stretch," without cessation, except at meal-times. At the end of the thirty-two hours the lad fell amongst the machinery and was killed, and it was believed that the accident was due to exhaustion. Mr. Quin was fined 10*l.* and costs. We wonder he was not tried for manslaughter.

**Cashel Rock.**—A Bill to vest the Rock of Cashel in trustees, for the purposes of the restoration of the cathedral and the preservation of the historical ruins, is now before Parliament. The Duke of Norfolk, Archbishop of Cashel, Marquess of Clanricarde, Earls of Denbigh, Fingall, Granard, Kenmare, and Limerick, Viscount Southwell, and other men of note, are among the proposed trustees.

**The Losses at Chicago.** — The "Fire Marshal" of Chicago reports the aggregate losses by the great fire to have been upwards of 190,000,000 dols., there being 51,500,000 dols. on buildings, and the remainder on personal property. The fire, he states, burned over 2,000 acres, destroying 25,000 buildings. The amount of insurance was about 90,000,000 dols.

**The Public Park Movement at Ashton.**—The committee organised for the purpose of procuring a public park at Ashton-under-Lyne, have within the past week purchased the Highfield estate for 2,000*l.* On receipt of the money Mr. H. T. Darnton returned 500*l.* as his subscription.

**Rust's Vitrified Marble.**—In our "Notes at the International Exhibition" (p. 357, *ante*), we mentioned the "Head of Daniel" in mosaic, from a design by Mr. Stephens. We are asked to add, and do so willingly, that this work is exhibited and executed by Mr. Jesse Rust (in his patent vitrified marble material).

**Society of Arts' Conversazione.** — The Society's Conversazione is fixed to take place at the South Kensington Museum, on Wednesday, the 19th June.

## TENDERS

For the erection of new printing and publishing offices for the *Surrey Advertiser*, Market-street, Guildford. Mr. Henry Peak, architect:—

| | |
|---|---|
| Mason | £625 0 0 |
| Strudwick | 620 0 0 |
| Garnett | 577 5 0 |
| Pollard & Son | 544 4 0 |
| Lee | 533 0 0 |
| Burdett | 427 0 0 |
| Swayne & Sons (accepted) | 424 10 0 |

For taking out wood front and fixing a stone lower front, for Messrs. J. Hoole & Co., 36, Aldermanbury. Mr. W. Lambert, architect:—

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|---|---|
| Bostel (accepted) | £263 0 0 |

For finishing two villas, at St. Margaret's, Isleworth (without fences), for Mr. Fisher. Mr. W. C. Banks, architect:—

| | |
|---|---|
| Hatton | £1,438 0 0 |
| Newton | 1,144 0 0 |
| Walton & Son | 1,055 0 0 |
| Ware | 975 0 0 |
| Ellis | 950 0 0 |
| Blackmore & Morley | 940 0 0 |
| Lyons | 923 0 0 |
| Hubble & Co. | 825 0 0 |

For drainage, kerbing, channelling, and other works connected with the repair of Victoria-road, Park-road, and Church-road, in the manor of Aston. Mr. W. Batten, surveyor:—

| | |
|---|---|
| Jones | £9,312 15 0 |
| Fitzmaurls | 8,652 0 0 |
| Read & Bourne | 8,275 8 11 |
| Palmer & Lea (accepted) | 8,011 5 0 |

For new parsonage in the Holland-road, Kensington, for the Rev. G. Booker. Mr. T. Lawrie, architect:—

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|---|---|
| Adams (accepted) | £1,580 0 0 |

For the erection of a warehouse, Smart's-buildings, Holborn, for Mr. J. P. Sherry. Mr. W. Hudson, architect:—

| | |
|---|---|
| Jennings | £1,397 0 0 |
| Newman & Mann | 1,324 0 0 |
| Moreland & Son | 1,295 0 0 |
| Bell & Son | 1,240 0 0 |
| King & Son | 1,188 0 0 |
| Sewell & Son | 1,187 0 0 |
| Wicks & Bangs | 1,182 0 0 |
| Browne & Robinson | 1,124 0 0 |

For the erection of schools for the Port of Hull Society, in connexion with the Sailors' Orphan Home, Park-street, Hull. Mr. W. Botterill, architect. Quantities not supplied:—

| | |
|---|---|
| Musgrave & Son | £2,780 0 0 |
| Marshall | 2,766 16 0 |
| Stanley | 2,760 0 0 |
| Lison & Wilkinson | 2,758 19 0 |
| Habbershaw | 2,732 0 0 |
| Clarkson | 2,695 0 0 |
| Sergeant | 2,694 0 0 |
| Jackson | 2,684 0 0 |
| Hockney & Leggins (accepted) | 2,677 0 0 |

For the alteration and enlargement of Eastella House, Hull. Mr. W. Botterill, architect. Quantities not supplied:—

| | |
|---|---|
| Morrell | £4,163 0 0 |
| Habbershaw | 3,824 10 0 |
| Musgrave & Son | 3,800 0 0 |
| Marshall | 3,641 12 0 |
| Clarkson | 3,610 0 0 |
| Hutchinson & Son (accepted) | 3,500 0 0 |

For the erection of two pairs of labourers' cottages at Broughton, Bucks, for Mr. Leyton Lowndes. Messrs. Brown & Foulkes, architects:—

| | |
|---|---|
| Durley | £705 0 0 |
| Mayne | 680 0 0 |
| Honour | 590 0 0 |
| Smith & Fincher | 559 10 0 |
| Senior (accepted) | 550 0 0 |

For the erection of a factory, with engine-house and chimney-shaft, at the corner of Bowling-green-lane, Farringdon-road, for Messrs. Orrin & Geer. Mr. W. S. Witherington, architect. Quantities by Messrs. Linsdell & Giffard:—

| | Carcass. | With Fittings. |
|---|---|---|
| Little | £5,237 0 0 | £5,637 0 0 |
| Rider & Son | 4,450 0 0 | 4,796 0 0 |
| Williams & Son | 4,450 0 0 | 4,785 0 0 |
| Henshaw & Co. | 4,257 0 0 | 4,551 0 0 |
| Eaton & Chapman | 4,111 0 0 | 4,462 0 0 |
| Sabey & Son | 4,089 0 0 | 4,457 0 0 |
| Perry & Co. | 4,100 0 0 | 4,436 0 0 |
| Palmer & Son | — | 4,400 0 0 |
| Browne & Robinson | 3,932 0 0 | 4,228 0 0 |
| Elkington | 3,800 0 0 | 4,056 0 0 |

For alterations at 56, Manchester-street, Manchester-square. Mr. W. S. Witherington, architect:—

| | |
|---|---|
| Elkington | £498 0 0 |
| Knapp | 489 6 11 |
| Terrey | 465 0 0 |
| Little | 405 0 0 |

For Cumberland Infirmary, near Carlisle:—

| | |
|---|---|
| *Mason's, &c. Work.* | |
| Hutton & Bell | £3,422 0 0 |
| Nilson & Co. | 3,051 4 8 |
| Milburn | 2,848 2 6 |
| Armstrong | 2,795 0 0 |
| *Carpenter and Joiner's Work.* | |
| Court | 1,533 3 0 |
| Black | 1,364 0 0 |
| Armstrong | 1,343 0 0 |
| *Plumber's Work.* | |
| Hills | 457 0 0 |
| Lowthian | 470 6 6 |
| Thompson & Son | 450 16 2 |
| Johnson & Son | 419 15 0 |
| *Slater's Work.* | |
| Irving | 141 13 0 |
| Norman | 140 10 0 |
| Nanson | 138 0 0 |
| Graham & Co. | 122 12 0 |
| *Painter and Glazier's Work.* | |
| Wenard | 275 0 0 |
| Westray | 243 7 6 |
| Canning | 228 10 0 |
| Slee & Morgan | 216 10 6 |
| Scott | 215 14 0 |
| Hill | 213 10 0 |
| *Glazier's Work only.* | |
| Johnson | 137 2 6 |
| *Plasterer's Work.* | |
| Waller | 150 10 0 |
| Ormerod | 95 0 0 |
| Johnston, Bros. | 83 5 0 |
| *Ironwork.* | |
| Bell | 102 10 0 |
| Lees & Graham | 82 9 2 |
| Clark | 78 15 0 |

| *For the Whole.* | With Pediment. | Without. |
|---|---|---|
| Armstrong | £5,359 1 0 | 5,058 11 0 |
| Milburn | 5,219 0 0 | 5,051 7 6 |

For photographic studio, Southsea. Messrs. Dancaster & Inskipp, architects:—

| | |
|---|---|
| Lascelles | £550 0 0 |
| Cumming & Edmunds | 550 0 0 |
| Howitt & Co. | 439 3 6 |

For the erection of refreshment-room, near the Steam-boat-pier, Battersea Park, for Mr. Alexander Buicchi. Mr. S. J. Stedman, architect. Quantities not supplied:—

| | |
|---|---|
| Baker | £414 0 0 |
| Lathey, Bros. (accepted) | 299 0 0 |

For additions to 102, High-street, Peckham. Mr. Dinwiddy, architect. Quantities supplied:—

| | |
|---|---|
| Fenn | £953 0 0 |
| Willes | 797 0 0 |
| Nightingale | 787 0 0 |
| Hunt & Son | 717 0 0 |

For additions and decorations, Halkin-street, Grosvenor-place. Mr. Dinwiddy, architect:—

| | |
|---|---|
| Raiment & Son | £669 0 0 |

For villa residence for Mr. G. Fox. Mr. Norton, architect:—

| | |
|---|---|
| Blease | £3,443 0 0 |
| Wagner | 3,180 0 0 |
| Stephenson | 3,178 0 0 |
| Lovell | 3,100 0 0 |
| Aitchison & Walker | 3,089 0 0 |
| Moore & Grainger | 2,980 0 0 |
| Hughesdon | 2,975 0 0 |
| Grover | 2,975 0 0 |
| Clarke | 2,953 0 0 |
| Gooding | 2,815 0 0 |
| Johnson | 2,745 0 0 |
| Crook & Wall | 2,700 0 0 |
| Wright, Brothers, & Goodchild* | 2,675 0 0 |

* Accepted.

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THE Advertiser requires an ENGAGEMENT as GENERAL FOREMAN. Good references; also an abstainer for twenty-two years.—Address, M. P. Post-office, Union-terrace, Notting-hill.

TO TIMBER MERCHANTS.

THE Advertiser, who has had four years and a half experience in buying, selling, measuring, and converting both English and foreign timber, is seeking a SITUATION in a good house, where he could obtain more experience. The amount of salary not an object. Most satisfactory references, and security if required. Address, L. W. P. Ashley Lodge, Basingstoke.

GRAINING and WRITING.—A first-class GRAINER is open to a JOB of GRAINING or WRITING.—Address, B. YOUNG, 186, Vauxhall-bridge-road, Pimlico.

TO ARCHITECTS AND SURVEYORS.

DISENGAGED, an ASSISTANT. Six years in the profession. Has had good practical experience. Good references, &c.—Address, Mr. BYRNE, 67, Great Portland-street, W.

TO ARCHITECTS.

CLERK of WORKS, having first-class references, is open for a RE-ENGAGEMENT. — Address, ACANTHUS, Post-office, New-street, Birmingham.

CLERK of WORKS, having just completed extensive works, seeks a RE-ENGAGEMENT. References and testimonials from present and previous employers.—Address, CLERK of WORKS, Post-office, New-street, Birmingham.

A FIRST-RATE DRAUGHTSMAN undertakes WORK at his own Rooms, on Moderate Terms. N.B. Perspectives effectively and artistically coloured.—Address, G. W. Post-office, Chancery-lane, W.C.

TO ARCHITECTS.

A GOOD DRAUGHTSMAN, and one who can give general assistance in office work, &c. having had four years' experience, seeks an ENGAGEMENT. Terms moderate. Highest references.—Address, F. W. K. 13, Hobury-street, Chelsea.

A GOOD DRAUGHSTMAN wishes for EVENING EMPLOYMENT. Drawings accurately and expeditionsly prepared, copied, or traced. Quantities prepared. Disengaged after four p.m. Terms moderate.—Address, A. B. 1, Boscobel-gardens, Regent's Park, N.W.

TO QUARRY OWNERS.

A GENTLEMAN, with a connexion amongst builders, is open to an ENGAGEMENT as TRAVELLER, or MANAGER of a STONE QUARRY.—Address, E. S. care of Mr. Barber, Albert-road, Aston Park, Birmingham.

TO ARCHITECTS AND SURVEYORS.

AN ASSISTANT, who has served his Articles in London, and has had twelve months' experience in the country, is destrous of an ENGAGEMENT.—Address, R. C. 12, Salem-street, Bradford, Yorks.

TO PLUMBERS AND BUILDERS.

A YOUNG MAN, aged 22, wishes to ARTICLE himself to the PLUMBING in a good shop. Moderate premium.—Address, A. H. S. J. Post-office, Mount-street, Grosvenor-square, W.

TO DECORATORS.

A YOUNG MAN, aged 21, been four years in the trade, wishes for a SITUATION as IMPROVER in the GRAINING and PAINTING. If indoors no salary will be required at commencement.—Address, C. STEEL, Hornchurch, Romford.

A GOOD PLUMBER, PAINTER, and GLAZIER is WANT of a SITUATION. Well experienced in first-class jobbing.—Address, PLUMBER, 134, Brompton-road.

TO BUILDERS AND PAINTERS.

A GOOD GRAINER and GENERAL PENCIL HAND WANTS a JOB, or an ENGAGEMENT.—Send terms to GRAINER, No. 7, Netley-street, Harrow-road, Paddington.

TO MASTER PAINTERS.

A SUPERIOR WRITER, GRAINER, MARBLER, &c. is open for RE-ENGAGEMENT.—Address, B. B. Post-office, Wolverhampton.

TO PROVINCIAL BUILDERS.

A MOST efficient BUILDER'S ACCOUNTANT and STOCK-TAKER, upwards of twenty years' practical experience, offers his SERVICES for TWO or THREE WEEKS. Terms as may be agreed.—Address, 486, Office of "The Builder."

TO BUILDERS, PLUMBERS, AND DECORATORS.

A SITUATION WANTED, as WORKING FOREMAN, or WORKING PARTNER in a small Business, by a practical PLUMBER.—Address, I. I. 7, Valentia-road, Brixton, London.

TO BUILDERS, &c.

A FOREMAN, experienced in the general arrangement of buildings, WANTS an ENGAGEMENT.—Address, W. W. 5, Addington-crescent, York-road, Lambeth, S.E.

SAW MILLS AND STEAM JOINERY WORKS.

AS FOREMAN or MANAGER, a RE-ENGAGEMENT WANTED, to measure and price labour and material, keep saw-mill accounts, convert timber, the management of men, &c. by an experienced practical Man. Aged 31. Joiner by trade.—Address, for further particulars, 495, Office of "The Builder."

TO ARCHITECTS AND SURVEYORS.

A YOUNG GENTLEMAN, who has served his articles in the country, desires an ENGAGEMENT as JUNIOR ASSISTANT, in a London firm, with a view to improvement. Salary not so much an object.—Address, No. 508, Office of "The Builder."

TO AUCTIONEERS, SURVEYORS, ESTATE AGENTS, &c.

A YOUNG GENTLEMAN, aged 22, wishes to obtain residence at the seaside. He possesses a good knowledge of the indoor and outdoor duties of a Surveyor's Office, having been for three years articled pupil to a metropolitan surveyor, and has since had the entire management of extensive drainage works, and has also been engaged in a surveyor's office. The advertiser, who is in the enjoyment of perfect health, is desirous of entering into an ENGAGEMENT with a gentleman, or firm having a good practice as above, and is willing, for the present, to give his services (subject to arrangement) in exchange for opportunities for further improvement and experience in the profession.—For particulars and reference, apply to M. T. care of Mr. Coates, High-street Hampstead, N.W.

## CONTRACTS—*Continued from p. ii.*

BUILDERS desirous of TENDERING for the ERECTION of a PARSONAGE-HOUSE, at Asthall, Oxon, are requested to send in their names to the Architect, Mr. JOHN COLLIER, Salters' Hall, St. Swithin's-lane, E.C. The lowest or any Tender will not necessarily be accepted.

KETTERING WATERWORKS.—TENDERS are invited for about 6¼ Miles of CAST-IRON PIPES, with Sluice Cocks, Hydrants, &c. in connexion with them, and the Laying and Fixing of the same. Drawings may be seen, and copies of the specification obtained, on payment of ten shillings, at the Office of the Engineer, Mr. THOMAS HENNELL, 7, Salisbury-street, Adelphi, London. Tenders must be forwarded on or before the 1st of JUNE, properly endorsed, to Messrs. G. & H. LAMB, Secretaries to the Kettering Water Company (Limited), Kettering, Northamptonshire. The lowest Tender will not necessarily be accepted.

ST. GEORGE'S UNION.—To BUILDERS. LAUNDRY at the Kensington Workhouse.—The Guardians of the Poor of the St. George's Union are prepared to receive TENDERS for the ERECTION of a LAUNDRY at their Workhouse at Kensington, in accordance with the plans and specification prepared by their Architect, Mr. H. SAXON SNELL, of 22, Southampton-buildings, W.C. Builders desirous of Tendering must send their applications either to this Office or to that of the Architect, marked "Tender for Building," not later than TWO o'clock p.m. the 20th inst. on a form which may be obtained from the Architect. When these applications have been laid before the Guardians, such builders as are selected by them will be furnished with a copy of the bills of quantities. The builder whose Tender is accepted will be required to provide two good sureties (to be approved by the Guardians), who will be bound in a sum equal to 30 per cent. of the amount of the contract, for the proper execution of the works. The Board will not bind themselves to accept the lowest or any Tender.—By order,

THOMAS WORLOCK, Clerk to the Guardians.

Clerk's Office, Mount-street, Grosvenor-square, W.
May 14, 1872.

CONTRACTORS WANTED, for CONCRETING in London, in the proportion of one part in five Portland cement. State prices per superficial square yard for 9 inches, 6 inches, and 3 inches deep.—Address, ENGELBACH & KERR, 2, Gresham-buildings, Basinghall-street, E.C.

TENDERS are invited for NEW SCHOOLS RESIDENCE, and BUILDINGS, at Liss, Hants, for the School Board. Plans and specifications may be seen, forms of Tender and all particulars obtained at the Offices of the Surveyor, Mr. THOS. ROOK MAPLES, of Queen's-chambers, Chapel-street, Bedford-row, London, W.C.; or at the Offices of JAS. SOAMES, Esq. Clerk to the Board, Petersfield, Hants. The Board do not pledge themselves to accept the lowest or any Tender.

TO BUILDERS.—Persons desirous of TENDERING for the ERECTION of a MANSION at Manton, Kirton, in Lindsay, Lincolnshire, are requested to send me their names, together with references to Architects under whom they have worked. Those selected to Tender will have quantities and all particulars sent them.

Sevenoaks, Kent. JOHN M. HOOKER, Architect.

TO BUILDERS. — Persons desirous of TENDERING for the REINSTATEMENT of the PREMISES, No. 30, Boundary-road, St. John's Wood, destroyed by fire, may inspect the specification, and obtain all particulars, at my Office, on TUESDAY next, the 21st instant. The lowest Tender will not necessarily be accepted. H. G. GRIBBLE, Architect,

No. 5, Thavies Inn, Holborn Circus, E.C.

TO QUARRY PROPRIETORS, CONTRACTORS, and OTHERS.—The Widnes Local Board are prepared TO LET their QUARRY at Pex Hill, in Cronton, for a period of one or more years. Particulars may be obtained on application to the undersigned.

Tenders to be addressed to the Chairman of the Waterworks Committee, Gasworks, Widnes, endorsed "Tender," and delivered on or before the 1st of JUNE next.

The Board do not bind themselves to accept the highest or any Tender.

Widnes, May 8th, 1872. T. A. DREW, Engineer.

TO CONTRACTORS.—The Directors of the Cockermouth Tweed Company (Limited) are desirous of receiving TENDERS for the WORK required in the CONSTRUCTION of a MILL at Cockermouth. Plans and specifications may be seen on and after the 13th inst. on application to Mr. F. BLEASBY, Chalonerstreet, Cockermouth; and sealed Tenders for the whole or separate portions of the work must be forwarded to the Secretary on or before NOON of the 28th inst. The Directors do not bind themselves to accept the lowest or any Tender.—By order,

JOHN MUSGRAVE, Secretary.

Cockermouth, May 8th, 1872.

TO ROAD CONTRACTORS and OTHERS. TENDERS are required for LAYING about 750 feet run of 12-inch EARTHENWARE PIPE SEWER, and for forming and making a NEW ROAD, on land abutting on the High-road, Wimbledon, Surrey. Plans, specifications, and conditions of contract may be inspected, at 4, Whitehall, London, S.W. Tenders to be delivered on MONDAY, MAY 27, 1872, at TWO o'clock; and the Owners do not bind themselves to accept the lowest or any Tender.

DRIVERS, Surveyors, Land Agents, and Auctioneers,
4, Whitehall, London.

OLD SWINDON LOCAL BOARD.—To BUILDERS, CONTRACTORS, and OTHERS.—The Old Swindon Local Board hereby give Notice that they intend to CONTRACT for LAYING DOWN, CONSTRUCTING, and completely FINISHING a certain intended BRICK and PIPE SEWER within their district, about 2,406 Yards in length.

Persons wishing to Contract for the same are requested to forward through the post, on or before MONDAY, the 3rd day of JUNE next, by TWELVE o'clock at noon, sealed Tenders, addressed to the "Clerk of the Old Swindon Local Board," endorsed "Tender for Sewer."

The plans and specifications of the works to be done may be seen at the Office of the Local Board, High-street, Swindon, and any further information may be obtained, either on personal application or by letter, prepaid, addressed to the Engineer, Mr. SHOPLAND, Bath-road, Swindon.

The party contracting will be required to give sufficient security, to be approved by the Local Board, for the due performance of the contract.

The Local Board will not hold themselves bound to accept the lowest or any Tender.—By order of the Board,

JAMES COPLESTON TOWNSEND, Clerk.

Local Board Office, 28, High-street, Old Swindon, 14th May, 1872.

BOROUGH of SALFORD.—To CONTRACTORS.—The Corporation of Salford invite TENDERS for the CONSTRUCTION of the WORKS required in Contract No. 1, of their INTERCEPTING SEWER for the Salford district. The works comprise the construction of about 3,700 yards of brick sewer, varying from 5 feet to 4 feet 6 inches in diameter, together with all manholes, ventilators, and junctions. Plans, sections, and drawings may be seen at the Office of Mr. JOHN BOWDEN, C.E. Surveyor, Townhall, Salford, from whom copies of bills of quantities, specification, and form of Tender may be obtained, on and after the 8th MAY, 1872, on payment of 5l. 5s. which sum will be returned to all persons making a bonâ fide Tender, after the acceptance of a Tender and on return of the documents entrusted to their care. Sealed Tenders, endorsed "Tender for Intercepting Sewer, Contract No. 1," addressed to the chairman of the Salford District General Purposes Committee, to be delivered at the Townhall, Salford, on or before the 22nd MAY, 1872.—The committee do not bind themselves to accept the lowest or any Tender.—By order,

EDWIN ANDREW, Town Clerk.

Townhall, Salford, April 29, 1872.

CLEANSING & REPAIRING SEWERS. CITY of LONDON.—The Commissioners of Sewers of this City will meet in the Guildhall of the said City, on TUESDAY, the 11th of JUNE next, at HALF-PAST TWELVE o'clock precisely, to receive TENDERS for the EXECUTION of such Works of CLEANSING and REPAIRING SEWERS within the said City, as may be required to be done during the term of three years, commencing at Midsummer-day next. A specification of the works and conditions of contract may be seen at this Office, together with a schedule of prices, and the Tenders are to state the per-centage, more or less than such scheduled prices at which the parties Tendering are willing to execute the said works. The Commissioners will require the party contracting to enter into bond, with two approved sureties, in the sum of 1,000l. for the due performance of the contract. All Tenders must be delivered to the undersigned before TWELVE o'clock on the day of treaty. The Commissioners do not pledge themselves to accept the lowest or any Tender, unless deemed eligible. The parties sending in proposals must attend personally or by a duly authorised agent, at HALF-PAST TWELVE o'clock on the said day of treaty, and the party whose Tender is accepted will be required to sign an agreement to execute a contract drawn up in accordance with the specification. JOSEPH DAW, Principal Clerk.

Sewers Office, Guildhall, 15th May, 1872.

ST. MARYLEBONE.—SEWERAGE.—To CONTRACTORS, BUILDERS, &c.—Notice is hereby given that the Vestry of the parish of St. Marylebone, in the county of Middlesex, will meet in the Board-room of the Court House of the said parish, on THURSDAY, the 6th day of JUNE, 1872, at ELEVEN o'clock in the forenoon, to receive TENDERS from persons willing to CONTRACT for the CONSTRUCTION of about 415 feet in length of NEW BRICK SEWER, with Bell Mouths, Ventilating Shafts, Gullies, and other Works in connexion therewith, also Brick Vaults in the formation of a new street from Wigmore-street to Hinde-street. Further particulars may be known, and drawings and specification seen, on application to the Chief Surveyor to the Vestry, Mr. T. GAUL BROWNING, at his daily attendance at the Court House, from TWELVE till ONE o'clock. The Tenders may be delivered to the Vestry Clerk, at the Court House, on or before ELEVEN o'clock in the forenoon of THURSDAY, the 6th day of JUNE, 1872, sealed and endorsed, "Tender for the New Sewerage Works, &c." and no Tender will be received after that hour. The contractor to find satisfactory securities for the performance of the works, and to pay the expenses of the bond and contract. The Vestry will expect the parties Tendering, or some person on their behalf, to be in attendance at the time of opening the Tenders. The Vestry do not pledge themselves to accept the lowest or any Tender.—By order,

W. E. GREENWELL, Vestry Clerk.

St. Marylebone, May, 1872.

The Builder.

VOL. XXX.—No. 1529.

## *On the Origin of the Element of Grandeur in the Antique.*

THE actual conditions of life among the ancient Greeks directly tended, as we have attempted to show,* to produce that breadth and grandeur of character of which both the art and the literature of Greece give the faithful reflection. It is no less important to investigate those details of physiognomical treatment, both of the face and of the form, which concur to produce the unrivalled beauty we speak of.

A critical analysis of the physiognomical characteristics of antique sculpture enables us at once to point out the main difference between the outline of the Grecian face and form, and the general contours both of the most civilised nations of Europe, at the present day, and of savage or even animal tribes.

If we describe, on the profile view of any face a circle, of which the centre is in the orifice of the ear, and the radius is equal to half the height of the head, or, more accurately regarded, to one-sixteenth part of the whole height of the figure when standing erect, the radii of this circle will furnish apt means of comparative measurement.

In the negro profile, the circle thus described intersects the outline of the face at the brow. The bridge of the nose falls within the circle; but the lower part of the face projects enormously before it, the lower lip advancing beyond the arc by one-fourth part of the length of the radius. The longest diameter of the head is that which is taken at thirty degrees from the horizontal, or from the chin to the occiput. The same proportions, in a somewhat exaggerated form, prevail in the anthropoid apes; the chief difference being in the greater depression of the upper part of the nose in these animals.

A well-proportioned modern European profile approaches much nearer to a circular form than does that of the negro, although the centre of the limiting circle does not coincide with the metric centre in the orifice of the ear. If we cut out in paper a circle of the radius previously given, and fit it to the profiles of which we are speaking, we shall find that, in the negro, the skull proper is depressed and flattened, so as to come within the circular outline, while the entire lower part of the face, from the root of the wings of the nose to the angle of the jaw, appears without the disc. In the modern European head, the coincidence of the skull with the circle is approximately close, and the projection of the lower part of the face much less than in the African. But in the Greek head, the skull is compressed instead of depressed; the anterior and posterior parts of the outline come within the limiting circle with which the upper part of the skull coincides, and only the extremity of the nose, and the chin, from the upper lip to the juncture with the neck, project beyond it. The diameters of the profile, taken at different angles through the ear, differ but little from each other. The longest radial line is that which is drawn to the upper part of the forehead, at sixty degrees from the horizontal. This is a seventh part longer than the radial height to the brow, which again exceeds that drawn to the outline of the nose. In the modern European head, the two latter radii nearly coincide, and are but little shorter than the distance from the ear to the top of the forehead. These details may be summed up by saying, that in the negro profile the mouth and jaws form the most conspicuous part; in the modern European profile the nose, eyes, and brow; and in the Greek the forehead, which thus casts a deep shadow over the cavity of the eyes.

The physiognomical interpretation of these great distinctive tribal features appears to be this. In the negro tribes the animal passions are so conspicuously developed, as to form, it may be said, the key to the character. In the modern European head, observation of the material world, and disposition to the energy of individual action, are indicated. In the Greek, we find reflection, imagination, and a superiority of the moral and intellectual development over that of either the passional or the industrial and accumulative propensities. If we compare the doctrines of Plato with those of Adam Smith, we shall find a pregnant illustration of the truth of this comparison.

Such being the general character of the Greek head, the several types representing the different gods, heroes, and chief subjects of the sculptor's art, composed so many distinct varieties of the same general theme. In dealing with this branch of the subject, it is evident that the great Greek sculptors were bound by exact and well-considered laws. The physiognomical indications of certain ideal impersonations were arrived at by careful study, and, no doubt, by careful induction from observation. Once attained, the type became fixed. The Greek sculptors were not in the habit of producing in an undraped figure the copy of any casual model, and then indifferently naming it an Eve, a Venus, or Musidora. The vague lawlessness of modern sculpture was, happily, unknown in Greece. A definite idea, and, for the most part, a grand and beautiful idea, was embodied in every statue. The greatest sculptors wrought as men who had seen the gods. So brief was the period in which the sculptor's art arose, attained its zenith, and commenced its decadence, that it seems probable that adequate study may hereafter enable us to determine, with extreme precision, the date of all the most famous relics discovered, or to be discovered. The work of the sixth century before our era, as illustrated by the metopes of Selinus, and the Apollo of Tegea, was rude, rigid, and recalled very strongly the Egyptian type. By the middle or latter third of the fifth century B.C., sculpture had attained its utmost grandeur. The works of Phidias, in 432, and of Polycletus, some ten years later, comprise the most famous productions of the Greek chisel, and probably the most noble human works yet produced. The former sculptor, in addition to the grandeur of his conceptions, and the magnificent breadth of his style, possessed, in perfection, that scientific instinct of the sculptor which enabled him so to introduce into his work the equivalent of that which in drawing is called fore-shortening, as to adapt each statue to the position and point of view for which it was intended. In this religious period of the art, that which we may call chamber sculpture appears to have been little known, as far at least as full-sized works in the round are concerned. The story of the contention between Phidias and Alcamenes, the work of the former receiving the chief applause of all when seen in the studio, but presenting no approach to the excellence of that of Phidias when erected in the place it was destined to occupy, is confirmed, in its main truth, by a seated figure from the pediment of the Parthenon now in the British Museum. The thighs of that grand statue,—thought with justice to personify one of the Fates,—are altogether out of truth if regarded from the level of the eye. It would have been well for some of the persons who have been so perplexed by the attempt to design a seated figure for the Hyde Park monument that should be other than atrocious, to study this great lesson left by the Athenian sculptor. Of Polycletus we have the tradition, not only of the grandeur of his work, but of the exact and exquisite geometric proportions of his canon of the form.

It is possible that the pathognomic expression of the face was carried to the highest pitch of excellence somewhat later than the age of Phidias. The Cupid discovered at Le Cento Celsi, and now in the Vatican, is probably the most beautiful relic in the world, and there can be little doubt that it is a genuine copy of the famous Cupid of Praxiteles. The name of Euphranor is given by Pliny as that of a sculptor who gave greater proportionate size to the head and limbs than to the trunk. Something of this treatment may be traced in the Juno of Melos. With Lysippus, the contemporary of Alexander the Great, the very opposite style of variation was attempted, the head being made smaller than the canonical proportion. Of the influence of this school, the Venus de' Medici affords the most striking example.

During this grand and unrivalled age of art, while the modifications at which we have hinted were in course of development, the great characteristic that the sculptor worked by law, and not by chance or caprice, was absolute. We may detect the hand of a Roman copyist of a Greek statue as much by the slovenly inaccuracy of his proportions as by the less sculptural feeling thrown into the finish of the work. Such we lately noticed in the statue of a Greek binding a fillet round his head, recently purchased by the British Museum. In the Greek work, certain exact proportions are to be remarked. The various types of figure had each a normal law. The foot was the modulus of girth, and the proportion of the length of the foot to the height of the figure was thus the key to the character of the latter. Thus we find in the Venus de' Medici that the length of the foot is exactly the seventh part of the height of the statue, when reduced to the erect posture. In the Juno of Melos, again, the foot is very nearly 5-32nds of the height. But in each statue the girth of the waist is exactly three times the length of the foot. In the former, the girth of the shoulders and of the loins, which are less easy to determine in the latter, are each exactly four times that length.

From the detection of so unsuspected an exactitude, which has so long mutely testified to the possession by the Greek sculptors of geometric laws, and of physiognomical rules, now altogether lost or ignored, may be drawn an inference of a character yet more important than any discovery of a merely artistic character. The philosophy of Greece, its mathematics, physics, metaphysics, rhetoric, poetics, politics, were all not only wrought to system, and taught by sophists and philosophers, but were reduced, at least in outline, to writing. It is not too much to say that almost the entire outline of Western philosophy is based upon the works of Aristotle. But of the art of Greece no such record exists. Nor is it likely that the rules of art were ever thus placed within the grasp of the profane. This silence is not peculiar to Greece. It prevailed universally, almost to our own time. When, as in the more stable

* See p. 237, *ante*.

empires of old, occupations were hereditary, the value and the sanctity of the oral tradition of art may be readily comprehended. As the circle of innovation extended, and as the artist became able to adopt pupils, or to instruct strangers in the art, the mystery of each craft was not less rigidly guarded. In cases where written instructions, apart from example and actual training, are to a great extent in operation, secrecy can not be practised. We thus see how, among a highly-cultivated people, the functions of historic teaching were divided from those of oral tradition. Each had its appropriate province. Each has ever retained it. To fix the site of a battle, the name of a king, the authorship of an unsigned book, oral tradition has proved itself to be altogether untrustworthy. Events can only be entrusted to the recording muse of history,—to the pen or to the chisel. On the other hand, any attempt thus to stereotype the living learning of art must fail. One of the few Mediæval treatises of the kind that we possess, that of Picciolpassi on "Majolica," is already almost unintelligible, though written with the evident purpose of instruction. With the fall of the liberty or the autonomy of a country will perish not only its art, but the traditions of its art. It is only while the oral legacy is handed down, in the studio, at the forge, and at the bench, that art lives.

One of the most striking peculiarities of the sculpture of the purest Greek art is that of the pose of the figure, especially the inclination of the head. The contrast between heroic representation and Roman iconography is here most marked. The subject should be regarded not only from the pictorial or sculptural point of view, but as a physiognomical indication of no little value. We must not be induced, from distaste towards those dogmas of phrenology which are not only unproved, but, in the opinion of most persons competent to judge, opposed to physiological science, to overlook the great importance of the contributions which Gall and his disciples have made to the study of positive and of comparative physiognomy. No writer, with the brilliant exception of Camper, has done so much to elucidate this important branch of art, of philosophy, and of ethnology, as have several disciples of this school. The large collections of busts, including those of remarkable criminals, that have been made by phrenological students, have a value that has not yet been fully realised. No indication of this class has been more pregnant than those which regard what has been unfortunately termed the natural language of the organs of the head. All accurate observation, whether of man or of beast, proves the certitude with which emotion or thought is translated into visible expression by attitude. The position of the head is the most striking detail of the general pose. The habitual carriage denotes the ordinary habit of thought; the momentary pose, the ruling emotion of the moment. The stealthy crouch of the cat when about to spring, the timid glance of the hare, the broad gaze of the stag, the depressed ears of the horse when meditating mischief, are unmistakable. Scarcely less so are the steady, open gaze of the honest man; the shy, reverted glance of the coward; the sideway toss of the head of the vain person; the lofty bearing of the proud. In each of these, and in numerous other instances, the actual angle at which the head is borne on the neck is one of the most distinctive elements of pathognomical expression. In exterior nature, as in the mind itself, habit is formed by repetition of similar acts. The proud man or the courageous man, while more liable than the servile or the timid to the excitement of the respective emotion, and to its concurrent momentary expression, is likely to acquire a bearing habitually expressive of that tendency. There is not only a psychical, but a mechanical, mode of regarding this part of physiognomy. The position of the head, when at rest, is, as we have said, characteristic. It is also determined, to a great degree, by actual form. The projecting jaw and correspondingly elongated occiput of the Negroid races determine an habitual position of the head that throws the face towards the sky. The contrary form of massive forehead and rounded chin produces the opposite bearing, that downcast glance which artists have agreed with poets to call pensive. Camper, who first in modern times laid the compasses to the profile, has called attention to the question of form. But he has not sufficiently regarded the concurrent question of pose. In some of his diagrams he has attributed to the former what is actually due to the latter. He has given an angle as anatomical, while it is, really, only habitual. For in the profiles which he draws to illustrate the facial angle of 100°, which he attributes to Jupiter and similar heads, it will be seen that the radial lines do not start from the orifice of the ear. The artist must be more readily guided by pose, than by form, independent of pose. The former strikes the eye at once, the latter requires investigation of a minute, or even of an anatomical, character. It is, therefore, with a double truth that the pensive pose common to Greek heads reflects the grandeur of the Greek character. Achilles, nursing his wrath in his tent, listening with repressed longing to the distant din of war; Ariadne, or Andromeda, deserted and downcast; Jupiter, sitting silent while Thetis embraces his knees, and pleads for her son,—are impersonations wholly Greek. They are faithfully represented by Greek sculpture. Both the character and the plastic embodiment are foreign to modern life. We might as well expect to see Aristotle take the leadership of the House of Commons as endeavour to recall or to embody the ideas of the epic and tragic poets, or the epic and tragic artists, of Greece. Here is another element of antique grandeur.

What may be the future development of the personal beauty, of the intellectual vigour, or of the moral grandeur, of any branch of the human family, is a question for the elucidation of which *data* are altogether wanting. We can only speak of what is, and of what has been the case; and we decline speculation as to what may be in store. As matter of history there seems good reason for the opinion that races of men, like their predecessors in the animal kingdom, have passed through the phases of infancy, maturity, and decline; race replacing race, but no declining people ever regaining their earlier vigour. In what quarter to look for the hope of the present age it is not easy to say. Marks of decline meet us almost everywhere. In the most martial and most cultured of European nations the very general use of spectacles betrays an enfeebling of the reflective nervous system. In France stature has been reduced by many inches, in consequence of the wars of the first empire and other causes; nor is it the physical man alone that shows marks of extreme degradation of type. In Italy very wide-spread disease saps the brilliant beauty which yet lingers in certain narrowly-limited districts. In England, the prosperity of dentists, and other symptoms easy to indicate, tell of anything but a vigorous vitality, especially in the young. In Australia the English race has bloomed into a new and delicate beauty; but it is as fragile as it is attractive. In America, the hard, pained, drawn, expression of the native Red Indian tribes has been communicated, without intermixture of blood, to the descendants of the European immigrants. Of the one ancient race, which, in its own Syrian country, still possesses some relics of its former beauty, the European representations do not give any very hopeful promise. No human beauty is historically more famous than that of the royal and sacerdotal lines of Judah, of Benjamin, and of Aaron; but the prohibition of iconography, which formed part of the ancient law, and which is reflected by that of Islam, has left us altogether without the means of forming any adequate idea of that wonderful grace that was equally admired in the East and in the West, that was found fairest among the women of Persia, and that made Herod the Great tremble lest Mark Antony should behold the children of Antigonus.

On this view of the case, it follows that the great period of Greece was one of the culminating epochs of race, and that in the most beautiful race of which we have any graphic record. It is beside the mark to contend that in this or that detail we ourselves, or any other nation, are or are not immeasurably superior to Homeric heroes. Let it be so, or not, it does not interfere with the truth of the determination, that in the relics of the works of the great Greek artists, from Phidias to Praxiteles, we have the reflection of the highest human beauty, expressive of the utmost grandeur of human character, that iconographic history denotes as hitherto attained by any family of mankind.

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**Subsidence of Turnmill-street.** — Mr. Clutton, the arbitrator appointed by the Board of Trade to inquire into the cause of the subsidence of Turnmill-street, which has formed the subject of a dispute between the Clerkenwell Vestry and the Metropolitan Railway Company, has mulcted the latter in 1,600*l.* damages.

## A NEW HOSPITAL IN LIVERPOOL.

On Tuesday last a new hospital on a large scale, which has been in course of erection between three and four years, and which has involved an expenditure of more than 30,000*l.*, was formally opened by Prince Arthur during his visit to Liverpool this week. The proceedings were of a highly interesting character, about a thousand invited guests being present. The foundation-stone of the building, which is situated at the south end of the town, in the immediate vicinity of the line of docks, was laid between four and five years ago by the late Earl of Derby. It is called the "New Southern Hospital," and its erection has been rendered necessary in consequence of the existing hospital having been found altogether inadequate to the requirements of the district. Before the opening of the building an address was presented to the Prince by Mr. G. H. Horsfall, the president of the hospital committee, after which he was conducted through four of the principal wards, upon each of which he bestowed a name, and then declared the hospital open. The address presented to his Royal Highness on the occasion was in illuminated vellum, enclosed in a silver casket, and bore the following inscription:—"Presented to H.R.H. Prince Arthur, on the occasion of his Opening the New Southern Hospital, May 21st, 1872."

The building, including airing-yards, occupies a piece of land, in the form of a parallelogram, 300 ft. by 80 ft., and has what may be termed four frontages, being bounded by Caryl-street on the west, Grafton-street on the east, Hill-street on the south, and Cameron-street on the north. The plan of the building is arranged on the "pavilion" system. The administrative buildings occupy the frontage to Caryl-street, with the principal entrance in the centre, and the pavilions (or wards) occupy the frontages to Hill and Cameron streets, leaving a space between the administrative block and the wards free for ventilation, and the distance between the pavilions of 100 ft., which is open to Grafton-street, and used for airing-yards. The general disposition and isolation of the building is best seen on the first floor, on which story the hospital proper may be said to commence, the spaces between the blocks on the ground story being filled up with one-story buildings, except the spaces left for areas and airing-yards. The building is of a simple Gothic character of architecture. It is constructed of grey bricks, with stone cills and strings, the horizontal lines being marked with blue brick in bands. The entrance-porch is of stone, with a deeply recessed and moulded arch, having the tympanum left for sculpture. A certain form of ornament has been expended on this doorway, the carved caps being composed of foliage designed from plants such as the poppy, and others having medicinal virtues. The gable is intended to be finished with the figure of an angel, and the tympanum with a bas relievo representing the parable of the Good Samaritan. The roofs form a good feature in the design, the ends of each ward having two towers each, and the centres also show high-pitched roofs, all finished with wrought-iron cresting and finials; and it is worthy of note that the roofs are not merely ornamental, but eminently useful, and important parts of the hospital. The administrative block is only two stories high in the centre, and three at the ends, so as to cause as little obstruction to a free current of air between the ward blocks as possible. It comprises on the ground floor a large entrance-hall, to the right and left of which are placed the medical and general board-rooms. Behind these a corridor runs parallel to the front, from which are entered, on the right, the senior and junior house-surgeons' sitting-rooms, and on the left, the house dining-room, and matron's sitting-room. The patients' entrance is at the south end of this corridor. On the first and second floors of the administrative block are the surgeons', students', matron's, and nurses' bed-rooms and bath-room, as well as several patients' wards.

The hospital accommodation provides about 200 beds, and consists of accident wards on the ground-floor, and three tiers of wards for twelve beds, and two for twenty-six beds in each pavilion, besides many smaller wards for special cases and private wards in the administrative building. The wards and beds are spacious, and attached to each ward adjoining the staircase, are nurses' sitting-rooms and sculleries, food lifts being provided from and to each scullery, and foul-linen shoots on each landing

to receptacle below on the ground-floor. On the ground-floor, on the east of the corridor between the ward blocks, are placed the *post mortem*, dead-house, dispensary, and laboratory, the access and exit from dead-house and *post mortem* rooms being so arranged as to be quite private. In the centre of the corridor to the east, on the first-floor, is the chapel, and to the west the operating theatre. The patients' food is prepared in the serving-room, in which there is a hot table, and from this the trays are supplied, and sent to each floor of the wards by "lifts." A hydraulic "lift" for patients from the ground-floor to each floor of the wards is also provided.

The architects for the building are Messrs. Culshaw & Summers, of Liverpool; the chief contractor being Mr. George Rowe, also of Liverpool.

## MORE NOTES AT THE ACADEMY.

WANDERING through the eastern and less frequented quarter of the Academy galleries, the visitor comes with a sense of sudden refreshment upon the three pictures by Mr. Boughton, hung in a row in gallery VII.: "Spring-time," the "Flight of the Birds," and the "Coming of Winter" (579, 580, 581). This artist, pretty well known already by his pictures of English figures and manners of the period "when the first George was king," is one who has struck out a path of his own, wherein the present contributions show a marked advance, both in feeling and breadth of execution. These are of that type of work of which, in a quite different manner, Mr. Walker furnishes examples, wherein the feeling of landscape and figure is blended so that the one seems inseparable from the other in its effect on the mind. "Spring-time" shows us a single youthful figure in a nearly white dress, flowers opening in the grass at her feet, and in the middle distance a grove of trees with the early foliage beautifully indicated; the figure is charming in its fresh and simple grace. The companion picture, of the same type, is not less good in its way; but the larger one, the "Flight of the Birds," is still better. A wild moorland, a cold grey bit of sea on the left, two figures in the centre of the composition, one seated and the other standing, gazing with varied expressions of melancholy at the scene:—these are the elements of a picture which is full of suggestive poetry, beyond its general excellence as a painting. Mr. Boughton has not struck so deep a tone before; we shall look with interest for his future works.

M. Alma-Tadema is another of the artists with a specialty, who travelled out of his usual path last year, and has acknowledged a comparative failure by returning to it in this year's Exhibition. He, at least, has lost none of the powers which gained him his reputation; and his Egyptian interior, "Roman Period" (524), with a mourning party watching around the mummy, is as fine and highly-finished in its architectural detail and surface, and reflected light, as any of his earlier works; the large tropical plants, showing as a back-ground through the architecture, give a peculiar tone and richness, by contrast, to the warmer tints of the marbles, and a distinctive character to the composition. Among pictures showing a strong individuality in the treatment of a well-worn subject, is Mr. B. Rivière's "Daniel," standing with his back to the spectator, in the den, with a group of lions crouching before him with various attitudes and expressions of baffled rage and blood-thirstiness. As in his "Circe and Swine," last year, the figure is a comparative failure; the animals form the picture; the long bony form of the crouching lioness on the left is admirable. Of Mr. Watts's large picture of the "Curse of Cain," we could better speak if it were finished. We do not think either the subject or the treatment very happy, nor, so far as we can at present judge, the colour; there is some learned drawing in it. Among the few foreign pictures hung are one or two clever ones in the same room as the last-mentioned work; "Escadron de l'Armée de la Loire," by G. Regamy," is a clever thing, with a grim and certainly not patriotic humour in it; a row of extempore cavalry soldiers in motley garbs, and mounted on scarecrow-looking horses standing with their backs to the spectator. M. Tissot has two pictures in his well-known peculiar light scale of colour, "An Interesting Story" (389), and "Les Adieux" (644); the latter, a tender leave-taking of two young people through an iron gate, is most successful; the face of the young girl is charming in sentiment and execution. Among other figure-pictures of sufficient interest and originality to challenge remark, may be mentioned F. Goodall's "Bedouin Mother and Child," lighted by the "after glow" (of course: how tired we are getting of that expression!); Miss Edwards's "Goodbye" (651); "A Moorland Road in Brittany" (911), by Mr. J. Knight, a set of figures straggling up a road through a mist of heavy rain, very clever and suggestive; "Age and Infancy" (973), by T. Israels, a powerfully-painted old man and child, well worth looking at; and "Woman's Work" (1,082), a fine, impressive, though exceedingly simple picture, by Mr. J. D. Watson, of two (Breton?) women in the centre of a dark flat moor, laboriously piling up straw to cover some heaps of potatoes. We pass over sundry well-painted pictures, of Spanish subjects, by Mr. Burgess, an artist who is so far to be regarded, we fear, as an example of the fact that clever, careful, painstaking work will not in itself avail to give interest to pictures, unless the artist has something of his own mind, his own individuality, to give to them likewise. The one painting by Mr. Burgess, which has left its mark on our memory, is his single life-size figure, called "Hyacinthe," exhibited the year before last: cannot he put some of the same feeling and individuality into his more ambitious works, and render them something more than mere groups of figures in Spanish costumes?

"What is the object of landscape painting?" is a question to be suggested by the two paintings with which Mr. Millais has followed up his last year's *début* in this branch of his art. The crowds which the painter's good name draws around these are not discriminating on this point. "It is a landscape by Millais, and we must look at it," is about the extent of the art-criticism in most of these groups. If the object is merely an accurate transcript of nature, and nothing more, the success of one, at least, of these pictures, "Flowing to the River," and "Flowing to the Sea" (56 and 71), is complete. In the former the swirl of the swollen brook, the look of the draggled and straggling underwood, the damp from recent rain on the yellow leaves of the tree in the foreground, are given as well as any painting could give them, and with no look of labour or over-finish. The other picture is less striking in detail. In giving the trees on the further bank, the artist shows something of the same manner of painting the foliage in large, broad masses, with scarcely any attempt at breaking it up into "leafage," which some of the French landscape-painters have carried to perfection in middle-distance trees. Yet do we opine that these pictures do not quite fulfil what we really want from landscape art, or supply what we shall yet get from Mr. Millais; that, while such successful reproduction of nature is both a difficult and a valuable achievement, it is valuable as a means rather than an end; and that the real end of landscape-painting is to create a sentiment, to speak to our feelings through the medium of pictorial representation. It may be said that a realistic representation gives us the same feeling as the scene in nature would impart. We doubt it in any case, because absolute realism is impossible, not to mention that the great element of motion does not exist in a painting.

Two landscapes by Mr. Raven, "A Hampshire Homestead" (84), and "The Monk's Walk" (657), are praiseworthy because they convey to us the poetry and the sentiment of nature rather than the material facts. In Mr. MacWhirter's "Isle of Skye" (248), an impression is sought as much in the choice of subject as in the manner of setting it forth; if the artist depended entirely on his powers in the latter capacity, his pictures would take a lower place in public interest than they do. With a taste for grand natural subjects, he has acquired a capacity for treating them with an accordant force of style which tells powerfully; but an artist with such a subject as this, the mere elements of which are so impressive, has an immense advantage over one who, like Mr. Raven, aims at rendering simpler and quieter subjects impressive: in the former case the individuality lies in the scene, in the latter it resides in the artist alone. This picture, however, is a fine specimen of Mr. MacWhirter's powers; it is worth noting how much, we might almost say how completely, the real power of the composition results from the introduction of the black angular mass of crag which juts up near the foreground, and forms the salient point in the painting. Mr. Vicat Cole, in his fine view over an expanse of forest, "Noon" (110), has fortunately dropped that use of brilliant sunlight effect from one side of the painting which was degenerating into a receipt, and gave his pictures somewhat too much the look of a finely-conceived scenic effect; yet it may be doubted whether this picture can be regarded as entirely free from sensational treatment: there is a straining after an exaggerated effect of hot sunlight in the contrast between the golden lights and the strong blue of the shadows in the middle distance: every painter's eye will see blue in such shadows under such circumstances; but it never can be in nature so nakedly apparent as it is shown to be here. The artist's other quiet and less pretentious picture, "Dewy Eve" (550), though less generally admired at present, has, we think, much more of the qualities which give permanent value to a painting. Mr. J. C. Hook is in great force this year; to comment on his four paintings would occupy too much space here, but we point to the best of them, "As Jolly as a Sandboy" (390), not only as a capital example of this artist's powers, but as a notable illustration of doctrines advanced in our columns as to the necessity of "conventionalism" in painting, as well as in other arts. Mr. Hook's treatment of sea and sand is in reality conventional; but how? In this way, that no attempt is made for a moment to cheat the eyes of the spectator by minute imitation of texture; the water is not realistically like water, nor the sand like sand, but what he gives us is,—all that painting can fully and completely give,—the tone, the air-tint, the peculiar "run" of the sea, without any attempt at minutiæ which cannot adequately be given in painting: the representation is really a conventional one, but through this conventionalism he achieves what is in fact the best and purest naturalism which painting of this class can arrive at. Mr. Peter Graham's "Cradle of the Sea-bird" impresses one at first sight as one of the greatest things its author has yet produced: an immense rocky precipice rising perpendicularly from the sea to the right of the painting, and going off in sharp perspective from the foreground; a second study suggests the doubt whether this is equal to some of the painter's former less startling productions; whether here, too, there is not a *soupçon* of the scene-painter's art in the composition and arrangement at least. There are some fine sea-pieces by Mr. Brett, about whose merits and defects of style there is likely to be for some time a division of opinion, to result, we anticipate (if the painter is true to himself), in universal acknowledgment of his remarkable ability. One other landscape, by a veteran artist, Mr. J. Linnell, compels attention from the very powerful effect of the sunlight which has been aimed,—"The Ford" (664). We cannot think this a success: the colour is true and fine, but the "light" element is wanting; it is palpably pigments, and not light.

Mr. Millais's figure-subjects are entirely confined this year to portraits, one at least of which has by this time been more written about, looked at, and discussed, than is the case with most portraits in these degenerate days. The painter seems determined to show how he can be, in manner of execution as well as in choice of subjects, the very reverse of the young artist who won his fame by a very different order of paintings. Those who thought at the time that the so-called pre-Raffaelite school was, in its most marked features, but a temporary aberration or exaggeration, may fairly accept the practical testimony of one of its original leaders to the same view. Whether in his present leanings towards full, free, and "thick" execution, this remarkable and admirable painter has not given up some of the qualities, in execution at least, which make the value of a painting (as a painting) may be questioned; distinction of texture, for instance, is less marked in the portraits of the Misses Armstrong than one could wish to see it in a picture so largely filled with stuffs and other accessories. The different characters of the three sisters are capitally contrasted and discriminated, and the flesh tints, especially in the figure on the left, are a splendid success in the most delicate problem of colouring. In his other portraits, as in landscapes, Mr. Millais sets us thinking,—what is a portrait for? That of Sir James Paget (554) is one of the most purely realistic representations (and one of the most successful, as such) ever shown; viewed as a composition, exception would be at once taken to the unbroken expanse of lecture-board which fills the larger part of the canvass and

forms the background to the figure. The painter has aimed here at putting the able surgeon and surgical lecturer before his friends exactly as they have been accustomed to see him in the lecture-room, without any attempt at producing, either by costume, pose, composition, or colour, anything more of a picture than the real scene of his every-day work afforded. The portrait of the Marquis of Westminster (567) is very much in contrast to this, and is in fact almost more noticeable for its fine and unusual tone and harmony of colour than as a characteristic likeness. The first work would be valued chiefly by those who know the subject, and wish for a memorial of him; the second would be valued as a picture by those who did not know even whom it represents. On the whole, is not the latter principle the best on which to make portraits,—to make them pictures as well as portraits? We should have thought the question could never have admitted but of one answer, had not Mr. Millais in the Paget portrait so boldly and ably challenged admiration for pure realism. The question involved is, whether we are to make the representation of an individual the first object, or whether we are to use him or her, so to speak, as an opportunity and excuse for an impressive pictorial composition; whether, in short, humanity or art is to be the greater. Perhaps it will depend a good deal on the idiosyncrasies of the subject of the painting. Mr. Watts gives a very charming example of the poetic and idealised portrait in his likeness of Miss Dalrymple (215), sitting, in a green robe, by the side of a brook; but is there not here rather too obvious an attempt at effect, almost bordering on the theatrical? Mr. Watts is one of those artists upon whom benedictions should be showered, for that he has done much towards rescuing portrait-painting from the hopelessly tame commonplaces into which it had sunk with us, and which still form the majority in the Academy and elsewhere. But he has achieved the union of portraiture with high art, in other works, in a way not quite so ostentatious as this (if we may be pardoned the term). To blend the ideal with the real, to let the artistic fire shine through the versimilitude of the sitter, as if it were a necessary part of the conception and inseparable from it,—that is the triumph of portrait-painting; a triumph which the artist referred to has achieved elsewhere, but not quite here. The "portrait" is merged in the "picture." This cannot be said of the portrait of "R. H. W. Dunlop, Esq." (266). Mr. Watts has been fortunate in his subject here, and has given us a remarkably powerful delineation of a striking and, in every sense, strongly marked physiognomy, which required little more than successful and bold realistic treatment to make a picture. The arrangement of the light, however, so as to bring out the subject in the most effective manner, is truly artistic. There are also the same artist's portraits of Mr. Prinsep and Mr. Calderon (the painters have taken to portraying one another of late), and Mr. Calderon in turn has painted Mr. Marks. Mr. Calderon's "Mrs. Cazalet" (610), a full-length small-sized portrait, is the most powerfully painted work which the artist exhibits this year: the lady is represented standing by the fireplace in an interior, in a gown of mainly a strong deep-red tint; the effect is unusual, but scarcely pleasing. These, with one by Mr. J. P. Knight, are the noteworthy portraits of the year: and there is Mr. Sant's "Mrs. Haldane Chinnery" (264), in a black dress and carrying a basket; painted with all the artist's usual good taste and refinement, but not in the whole his best portrait; the difficulty of the mass of black dress in a life-size portrait has not been quite got over. A characteristic and pretty child portrait is that of "Madlle. A. B., Petite-fille de l'Artiste," by M. Gallait (908); the little lady, about three or four years old apparently, stands, with one hand in the pocket of her pelisse, in an amusingly self-possessed and important attitude. Mr. Goodall's portrait of the "Right Hon. Sir T. M'Neill" (545) is a successful painting of a fine, thoughtful, characteristic head; and many besides the readers of this journal will find interest also in the likeness "T. L. Donaldson, Esq., Past-President of the Institute of Architects" (584); a very good likeness by Mr. Charles Martin. The same painter has a striking portrait of "J. R. Planché, Esq., *Somerset Herald*," which is less successful as a likeness in the lower part of the face than the upper, where it is excellent.

On the whole, portraiture is well represented this year, the proportion of portraits which are really interesting being greater than for two or three past years of the Academy Exhibition.

## GOSSIP FROM PARIS.

THE *Exposition des Beaux-Arts* opened on Friday, May 10th, to the public, with upwards of 2,000 works in painting, drawing, and sculpture; these being the selection made by the "jury" from the 5,400 sent in. The labours of the aforesaid jury must have been enormous; but all visitors to the *salon*, excepting the disappointed artists, will thank them for having so far diminished the feast they place before the public; for, rich as it is, it needs must satiate when in such excess of the powers of human nature to appropriate.

The Exhibition is very good indeed, as regards the works of art themselves: many of them are first-rate, and very few could well be spared; the building containing them, the *Palais de l'Industrie*, the shell of this rich nut, is not so worthy of commendation.

After two days spent *therein*, the impression left on my mind is, that it is inconveniently arranged, ill-cleaned, meanly decorated, badly lighted, and awfully draughty. I remember having felt exactly the same towards the French galleries in the great International Exhibition at Paris in 1867. To be sure, this said Friday was the wettest day of a wet week; but why have blinds that cannot be removed in dull weather? In a little conversation I had with the guardian of one of the rooms I remarked upon the bad lighting, and his reply was immensely characteristic of his nation: "Oh, no! it is the weather that is so bad." "Yes," said I;" but what a pity to have blinds that cannot be drawn back on a dull day." "No,—it is not the fault of the blinds," he insisted, "it is entirely the fault of the weather." "Any one or anything but yourselves for the scapegoat," thought I; and as I remembered the ease and rapidity with which the glass ceilings of our English picture-galleries have their linen blinds drawn across them or removed as shade or sunshine necessitates, I felt that this was yet another example in which "they" *do not* "manage those things better in France."

But to return to the pictures, which we must take according to the alphabetical arrangement of the artists' names, this being *de rigueur* in a French catalogue. Allongé,—a charming "Vue de la Ville du Puy"; Alma-Tadema, who is *hors concours*, which means that the artists so specified are beyond receiving any medal save the *médaille d'honneur*, "Un Empereur romain," exhibited in London last year, and a "Fête intime;" Anker, a clever and painfully-true representation of Bourbaki's soldiers in a stable, and cared for by Swiss peasants; Antigna, "Aragonaises d'Anso," with its play of sunshine and shade on the fine head of the tall girl who leans gracefully against a wall; Armand, "Défense de St. Quentin," with cleverly-painted trees; Appian,—excellent effect of early morning light on "Flotille de Barques Marchands"; Asselbergs,—clever "Coquelicots et Bluets"; Aubert, "Le Fil rompu," a young girl spinning her thread of life, when Love comes up suddenly and snips it in two; Baader, "La Toilette," an admirable old man clipping a large white poodle, and interrupted by a black intelligent-looking spaniel, which lays its paw on his arm; Batut, "Portrait de Mdlle. N.," *dessin*; Baudry, "Portrait de M. E. About," very clear, but so flat against its blue background; Berteaux, "Avec ces Amis-là pas de Déception," a studio with the lay figures dressed as men and women; Berthon, "Loin du Pays!" Bertrand, "Folie d'Ophélie," where she is dressed in white, and close beside it, but black-robed, "Mort d'Ophélie;" Betsellere, "L'Oublié," painfully real, the poor soldier having fallen insensible, face downwards, on the snowy, gory battlefield, he returns to consciousness, and half rises, to find himself left alone for dead; Bidau, "Le Printemps," charming lilac and other flowers; Bonnegrace, portrait of M. Despléchin and of Mdme. M.; Bouguereau, "Faucheuse"; Bréton, "Un Soir d'Hiver; Brochart, *pastel*,—"Position Critique," a lady escaped from an upset carriage, in a very bandit-suggesting landscape, and carrying her child in her arms; Cabanel, "Giacomina," portrait,—*costume Florentin du 15me siècle*; Cambon, "Portrait du Marquis d'A."; Caraud, "Jeune Fille portant un Chat"; Cassagne, "Le Printemps dans la Forêt"; Castan, "Soleil couchant en Hiver"; Castres, "Ambulance internationale par un Temps de Neige"; Chapuis, "Portrait du Capitaine L."; Charnay, "La Leçon d'Équitation"; Chenu, "La Visite de Noces,"—winter scene, the bride about to re-enter a country cart; Chintreuil, "La Chute du Jour"; Ciappori-Puche, "Notre Dame des Arts et des Sciences," beautifully draped figures,—*dessin*; Claude, E., "Curiosités"; and Claude, J. M., "L'Antichambre," sold for 1,500 francs; Clément, "Marchandes d'Eau et d'Oranges, Égypte"; Coeffier, Mdme., two portraits; Compte-Calix, "La Leçon de Géographie," a youth of gentle blood, said to be the Comte de Paris, tracing PARIS on the sand for a pretty country maiden; Coninck, "La Pêche," an Italian boy, and a sweet-faced fair-haired girl; Cot, "Le Jour des Morts au Campo Santo de Pise," the girl stooping to get a light from one of the lamps affixed to the graves; Couture, "Le Damoclès," in chains, surrounded by every luxury, a classic-looking fine thing; Daubigny, "Moulins à Dordrecht"; David, J., "Le Laissez-passer," *épisode du siége de Paris*, 1870-71; Delort, "Une Embuscade," four brightly-dressed 16th-century figures at the foot of an old grey tower; Déportes, "Mon Portrait"; Dieudonné, a pretty young girl in white; Dubos, "Le Papillon," a lady examining it through a magnifying glass; Dubufe, portrait de Mdme. H. S.; Faure, "Portrait de Mdme. J.," in puce silk dress and black lace; Feyen, "Les Glaneuses de la Mer," exquisitely delicate and minute; Feyen-Perrin, "Le Printemps de 1872"; Faucaucourt, "Vue de l'Etna"; Galliac, "Écho perdu," two men, possibly army surgeons, endeavouring to recall an ambulance to succour a poor *grièvement blessé*; Garnier, "Le Droit du Seigneur," he leading away a country bride as she comes out of church with her newly-made husband; Giraud, "La Porte défendue"; Glaize, "Spectacle de la Folie humaine," a long canvas, decorated with painted scarlet drapery like a theatre. In the front stands the exhibitor in a 16th-century black dress; to the left is a bright-blue notice-board, which says, "The pictures of human folly are continually changing." Those before the spectator are "Tuéries Bibliques," where Jews are seen killing the Ammonites; "Tuéries Chrétiennes," where Romans are the slaughterers; "Tuéries d'Hérétiques," in which Catholics are killing seceders of all sorts; and, finally, "Charlotte Corday and others going in a cart to the guillotine." This sad satire might well have had a fifth *tableau* added, "Communists of Paris burning their own City." M. Glaize also exhibits "Mort de Saint-Louis" and "Portrait de M. Ferrier," both admirable. Goethals, "Le Général Uhrich à Strasbourg"; Gontier, a garland of lovely roses; Gonbie, "Du Bœuf à Paris, Décembre, 1870," six emaciated horses and one donkey. This picture sold for 2,500 francs; but surely not to a Frenchman—would he not rather buy forgetfulness than a perpetual reminder of so melancholy an episode in his country's history? Goupil, "Une Nouvelle en Province," another war picture, with a wonderfully-painted Cachemire in it; but why the handsome girls are habited in rich satins so early in the day is a mystery to all but French *modistes*. Gudin, "Le Navire 'le Lafayette,' dans la Nuit du 18 Août, 1871"—*pastel*; Guès, "Jeunes Pages jouants"; delicate and minute as any miniature, and looks as if painted on copper or ivory, so smooth is the surface. Hardon, "Une Allée du Parc de Courquetaine"; Hébert, "Portrait de Madame la Marquise de J.," robed in white satin, the large wide-open eyes looking straight out of the canvas, and into the far-away future; there is no ring on the left hand, which is somewhat ostentatiously crossed over the right, as if with intention. The necklace of large pearls, each encircled by diamonds, and the strings of pearls on the head, all marvellously reproduced, show that to paint jewelry is rather a *forte* with the artist; therefore the absence of all finger-rings is the more noticeable. Utterly unable to solve the mystery, we applied for information to a gentlemanly Frenchman, who assured us that wedding-rings are not fashionable in France now! What next, I wonder? This seems the strangest of all the strange vagaries of this strange people. Some years ago, when the insertion of the words, "No cards," began to be general after the wedding announcements in the English papers, *Punch* took exception to the growing custom, and grumblingly said, "He supposed there would be no bride-cake and no wedding ring next." If marriages were solemnised in Paris during the siege, surely no bride-cake

could have been made or eaten; and now with the banishment of wedding-rings, the prophecy of our philosophic contemporary is curiously verified. Another instance of "how many a true word is spoken in jest."

Helmich sends an excellent picture, "Un Coin du Feu, 16me Siècle," in which a monkey and a dwarf are seen fencing for the amusement of a young, handsome couple, seated side by side in one spacious arm-chair, while their pretty page leans against the jamb of the quaint old mantel-shelf. A portrait in sepia of a child by Mdme. Herbelin is very charming; as is also Hirsch's portrait of Mdme. M——; Hublin's "Jeune Laitière Bretonne" has a very easy pose and pleasant face; Hue's "Manon Lescaut" and "Les Apprêts" are both admirable; as is also Mlle. Jacquemart's "Portrait de M. Thiers, Président de la République." About this last a little anecdote is told. When Mlle. Jacquemart went to the *salon*, she found the portrait surrounded by brighter-coloured pictures, which utterly annihilated the sallow face and snuff-coloured coat of M. le Président; so, on her own responsibility, she had them all removed and replaced by sombre-hued landscapes, and now her work shows admirably well; it certainly is a fine thing, so calm and quiet, and looking a most excellent likeness. A "Pommier en Fleurs," by Kreyder, reminds of Millais' "Apple Blossom;" but instead of the melancholy-looking holiday-making girls below, the French artist has filled his foreground with a mass of most charmingly-painted wild flowers. Lahalle's "Obsèques d'un Soldat français en Captivité en Allemagne" makes one think it was very good of the "spiked helmets" to pay their captives so much respect. Landelle, "Almée," a beautiful creature in thin black net-like drapery; Laurens, "Mort du Duc d'Enghien" in the ditch at Vincennes, looks ghastly and real; his brother and pupil sends two excellent works, "La Mosquée bleue," and "Jardins abandonnés," both scenes in Persia. A large picture, by Layraud, "Brigands et Captifs," is said to belong to the English Government; but why? The male captive bears a striking resemblance to the Marquis of Lorne: again, why? Lechevallier-Chevignard has a very excellent picture, in the stiff, rich-coloured manner, "Antonello de Messine et Giovanni Bellini," representing the latter habited as a gentleman, and having his portrait painted by the former, in order that he might watch the process of painting in oil, by which means (and meanness) he discovered the secret of the Messinese artists. Leclaire's picture, "Fleurs," camellias, and yellow damask drapery, is excellent; as is also Leloir's, called portraits, two young officers sitting on some felled trunks of trees. In "Le Bac japonais," Lenoir has hit upon quite a novel subject—seven swimmers, whose heads only are seen above the water, draw the boat along. Lesrel's "Le Dégustateur" is a charming little picture, most carefully painted, a young cavalier, with a beautiful face and handsome black and yellow slashed dress, is testing the quality of a glass of wine, which he holds in his hand. The late Matthias Leyendecker's "Perdrix grise," apparently hung up against a board, and Paul Leyendecker's "La Lecture," are both good; as is also Lobrichon's "Châteaux sur le Sable." In her pair of water-colour drawings, "Avant, 1870," and "Après, 1871," Mlle. Loire shows the melancholy contrast of war and peace. In the "Avant," a young country lad is seen carving his love's name, Julie, on a beech-tree; in "Après" he is returning home with a wooden leg, broken down and used up at twenty years of age. Loyeux, "Un Mignon" is a sad but fascinating picture; the *mignon* exquisitely painted, and in a charming costume of pink satin and white lace, is sinking mortally wounded on the steps of a house—possibly that of his lady-love—and is stretching up his hand to the knocker which he cannot quite succeed in reaching. Méry, "La Force prime le Droit!" Five apes are seen robbing a beehive, and getting fearfully stung by the bees *en revanche*; the one who has overturned the hive bears a strong resemblance to Prince Bismarck. This is known to be intentional, and the human bees crowd around the picture, whispering and smiling. It is said that several of the works sent in were thought by the Government to be likely to prove offensive to German susceptibilities. On this representation being made to the gentlemen composing the jury of selection, they suggested to the artists to withdraw them, which they very wisely and patriotically immediately consented to do. This fact shows great good sense on both sides, and is a step in the right direction of conciliation. Mesdag, pupil of M. Alma-Tadema, sends two charming water subjects, views at Scheveningen, reminding of E. W. Cooke in his best manner. Moorman's "Le Dessert," and Mouillon's "Les Blés," are both good; as is also Parrot's "Portrait du Général B." In "Jacques Cœur," Patrois preserves a worthy and patriotic act. Cœur, who lived in the fifteenth century, had acquired a large fortune as a financier. When the troubles and losses of his country occurred, he gave back his fortune to the Government, thus enabling it to raise a new army, by means of which the lost territory was regained. Picrus has two pictures, "Sancho fuyant la Cérémonie du Lavage," very excellent, and with a wonderful marble floor; and "Une Dame peignant," who has a charming face. Perignon's "Portrait de Mdme. la Comtesse Pepoli, *née* Alboni," is very good; and Perrault's "Le Mobilisé, 1870," is painfully real and dreadfully true. In "L'Automne," Pille shows a cleverly-painted old man, in a doorway, looking on at a dance. "La Moisson," by Potémont, is another of those heart-rending war-pictures. Wounded soldiers in a field of ripe corn, being searched for by the Geneva-cross wearers. Protais, in "La Séparation: Armée de Metz, 29 Octobre, 1870," shows a large group of saddened French officers on one side, while on the other, long files of soldiers are being marched off under German mounted escorts. Some few of them are turning to wave "farewell" to their deposed leaders. This is just one of the great charges in the present trial of Marshal Bazaine, the military judges declaring that on no condition whatever should any officer consent to be separated from the men under his command.

Quesnet's "Portrait du Docteur Lacroze" is clever; as is likewise Ravel's "Un Soldat, 16me Siècle." Richomme, in "Vergiss mein Nicht," probably means that the departed German donor of the love-flower has conquered the pretty French peasant as well as her country. Rodakowski, in "Sigismond 1er Roi de Pologne vaincu par les Séditions des Nobles," gives some most careful painting and admirable colouring, as seen especially in the black velvet robe lined with crimson satin. Saintin, in "2 Novembre, 1871," has reproduced another touching episode of the war; a sweet young creature in deep mourning visiting a tomb at Père-la-Chaise, inscribed "Honneur et Patrie." Saintpièrre's "Bacchante," semi-reclined on a panther skin, has a charming little face. Schenck's "Chevreuils, Effet de Givre," is very good. Schlesinger's "Peine perdue," a Spanish-looking lady whispering to a sweet innocent *bourgeoise* as they come out of a church; Schopin, "Derniers Instants de Duguescelin"; and "Vision du Cardinal de Richelieu à son Lit de Mort," in which skulls appear mistily on the wall beside him; Schreiber's "Premier Tableau, Premier Amour"; and Sebron's "Cheminée de la Salle d'Audience des Magistrats du Franc de Bruges," are all very good. The subject of the latter picture will be remembered by many as that of one of Louis Haghe's favourite works in our English water-colour gallery years ago.

Sirouy has a noticeable picture, "La Fortune." The life-size nude figure is too materialised, as she stands aloft poised on her wheel; but the groups below are admirable: the king, who tightly presses his crown on his head, while a semi-nude, savage-looking creature clutches at it; the queenly mother striving to protect her child and her treasure-casket; and so on, while the wheel of Fortune crashes over all alike. Thirion's "Épisode de l'Éruption du Vésuve," illustrating the description by the younger Pliny, well depicts hopeless horror, and bears an especial interest just now; "Les Sonneurs de Nuremberg," by Ulmann, is a quaint subject admirably executed; Van Elven's brilliant picture, "Hommages rendus à la Statue de Strasbourg, Place de la Concorde, pendant le Siége de Paris," will be remembered in the International Exhibition of London last year. Venot's "Portrait de l'Abbé —— de St. Denis," is very good, as is also Vetter's "Mazarin épuisé par la Fièvre," taking leave of his works of art. Villeneuve's "Portrait du Général de Cissey" is a fine thing. Von Thoren has a beautiful sky in his "Souvenir de Bade, Hiver, Soleil couchant"; Wahlberg some excellent water, in "Vue prise sur les Côtes de Bretagne"; and Wylie, an American by birth, has a clever picture in "La Sorcière bretonne."

Several good specimens of painting on porcelain and other materials are exhibited in the gallery, to wit:—"La Marée basse,"—*faïence*, by Bouquet; "La Naissance de Vénus,"—*porcelaine*, Mdme. Delphine de Cool; "La Belle Jardinière," after Raffaelle, by Mdme. Amélie Duburg,—*porcelaine*: both these ladies were born at Limoges; and "Néréide," *d'après Rubens*,—*porcelaine*, Mlle. Djina Gomez. A. F. de Courcy has a fine enamel portrait of Mdme. de S.; and Froullé a shell-cameo of "La Sainte Famille." Two cameo portraits on agate-onyx, by Papillon, are excellent; as is also the "Tête de Junon,"—*creux sur onyx*, with its *épreuve en cire*.

Among the architectural drawings, a very curious triangular knocker is shown; it is designated "Heurtoir trouvé dans l'Église," the *église* being that of the "Abbaye d'Elne, Pyrénées-Orientales." Two suggestions for memorials of the Siege of Paris, are anything but commendable; it is to be hoped neither will be carried out. The one, by Thierry-Ladrange, is called "Autel de la Patrie," and consists of a square pedestal (with bas-reliefs on every side), surmounted by a huge terminal figure, on the shaft of which names are to be inscribed; the other is by Vaudoyer, and is still more ugly; the form is a circular pyramid, consisting of a series of steps, the front of each step to bear names or other inscriptions.

Among the engravings, copies by Blanchard of two pictures well known to Englishmen, catch the eye: Francia's "Dead Christ" in the National Gallery of London, and Holman Hunt's "Christ in the Temple"; in the latter copy, the figures look dreadfully dwarfed and stumpy. Descending to the sculpture-hall, we find the various works tastefully disposed in the glazed garden of the Palais de l'Industrie. The flowering plants are an exhibition by themselves: masses of azaleas and geraniums with, interspersed between them at regular intervals, green aloes, small caoutchouc trees, palms, and other green-leaf-bearing plants. The introduction of these amongst the flowers is very admirable; but the custom of massing white round green, and then clustering all shades and colours of red together, likewise in masses, is anything but tasteful or artistic. Certainly the arranging of flowers and flower-gardens is best understood in England.

A very pleasing group of sculpture,—but only in plaster,—is composed of semi-figures of Erckmann and Chatrian, the well-known authors. They are portraits; both of them face the spectator, and Erckmann's left arm encircles Chatrian's shoulders; the group is by Bartholdi. Chatrousse, in his "Projet de Monument aux Martyrs de l'Indépendance nationale," has introduced Joan of Arc and Vercingetorix clasping hands. Vercingetorix was a chief of the Gauls in the time of Cæsar, and was conquered and led in triumph; so that, besides the chronological muddle, his career is no good augury for the modern liberators, any more than that of Joan of Arc. He seems, however, to be the favourite just now, for there is in the gallery an elaborate design, with four diagrams, of a proposed monument to be erected to him near Clermont Ferrand.

The present garden of the Exposition occupies about half of the enclosed space. The large coloured window at the other end, that nearest to Paris, is dreadfully shattered by the Communistic shot and shell; fully three-fourths of the painted glass is absent, but men were busily at work upon it. The rapidity with which all traces of the struggle in Paris are being obliterated is perfectly marvellous. A great deal has aleady been done on the beautiful Place de la Concorde in the way of restoration, but one of the eight colossal seated figures, representing principal towns in France, is still housed over; while of the pair of handsome bronze fountains, that nearest the Seine is entirely absent,—doubtless removed for extensive repairs. *Galignani* says the works of restoration on the Place de la Concorde alone have cost the Government 210,708 francs. To what sum the enormous rebuilding required throughout the city will eventually amount, it seems almost impossible to estimate. I see that the northern tower of Notre Dame is said to be under repair, "several fissures in the walls" having rendered it unsafe: whether this is part of the same fiendish work I know not, but within the venerable pile we saw workmen engaged repairing the steps and paving in front of the altar, which were shattered by the Communists.

The painted dome of the Panthéon is much injured, several obus having forced their way through it, and the exploded stonework having scattered about and done still more damage.

Some shells fell within the Hôtel des Invalides, but none struck the dome. How the Sainte-Chapelle escaped when Paris was fired by the Communists is a marvel. It stands in the hollow of a square of buildings, the Palais de Justice at the east end being within 9 ft. of the apse. All these were burning at once, and yet the chapel remained untouched. The old *gardien* told us he was there the whole of that fearful time: he would not leave, but "resolved to die with his charge, if it were destined to perish." It is useless to write of the Ministère de Finances, the Grenier d'Abondance, the Hôtel-de-Ville, the Tuileries, and other sad heaps of ruin. Everything has been said that need be said; but what a fearfully interesting "Guide to Paris" has now to be written for future visitors.

The puce *soutane* of poor Archbishop Darboy hangs in the same little closet in the sacristy of Notre Dame, in which are preserved those of Monsignors Affre and Sibour. His is pierced through with the bullet that entered his chest and passed out at the back, and it is all discoloured and mouldy, with blood and with the damp of the grave into which he was hurriedly flung. Of eleven Archbishops of Paris eight have met with violent deaths.

Two other victims, and, indeed, the two first victims of the Commune, General Clément-Thomas and Lecomte,—who were shot by their own soldiers when vainly endeavouring to regain those fatal guns, 200 in number, carried off by the rebels to Montmartre,—are buried within the small military practising-ground close to where they fell. A black cross, with the name inscribed, in a small garden, marks each grave. Belleville looks peaceable enough now, and well-to-do into the bargain; but walls are seen loop-holed, and houses specked with shot-marks, as we drive along.

The beautifully laid-out Butte de Chaumont was sadly devastated by the Communists, who pastured their horses and bivouacked their men there; but with careful attention this charming garden is completely restored to its former beauty. On the opposite side of Paris, taking the road to Fort Valérien, we come upon vast destruction of houses, levelled to prevent them serving as shelter to the Germans, or *les Prussiens*, as the French persist in calling them. The Église St. Ferdinand now stands completely isolated, in a desert of brick-and-mortar rubbish. Farther on the houses are fearfully shattered. At Courbevoie, the statue of the first Napoleon, which was brought thither from the *Colonne Vendôme* in the present emperor's time, is missing from its pedestal. During the siege of Paris it was dismounted and thrown into the Seine, in the night, by, it is said, M. Jules Simon and M. Jules Ferry, assisted by the painter Courbet, and others. How much of this assertion is to be believed, I know not; but that this (literally in-Seine) act was committed by some persons is certain. Continuing our journey to Mont Valérien, we plodded upwards to the entrance, but found an order from the War Minister was necessary to obtain admittance. However, we were well able to judge of the masterly manner in which the fort commands the whole country round—looking up the Seine, and reaching even to Paris. We remembered how the Communists marched in innocent confidence beneath its walls, flattering themselves the garrison was friendly to their views, and how its murderous guns opened upon the very centre of their column, cutting it in half, and spreading death and dismay in their ranks. Then we descended and continued our way to St. Cloud—poor ruined St. Cloud—along the bank of the Seine. The short drive is a most lovely one, with the brimming river on the left hand, and a succession of handsome residences, surrounded by lovely tree-filled grounds on the right. It is said of St. Cloud, that not a single house but was hit by shot or shell, or both. It was first fired on by the Germans, and then by the French; but, strange to say, in the midst of all this destruction and ruin, the church stands up unharmed. Many houses are restored, but many more still remain melancholy witnesses of the horrors of war. One gentleman, in rebuilding his handsome villa, has inserted shattered stone in the pediment, and replaced in the hole the huge obus that destroyed his former home.

The château is a mere shell; remains of internal decoration—painting, and gilding, and sculpture—still cling to the walls, making the desolation still more mournful; and tall columns of rare marbles stand upright in their place, with huge layers flaked off from their shafts by the fervent heat. The gardens look still very lovely in their springtide wealth of green; but the artificial ponds, formerly one of the great attractions of the place, are dry and dank, and their leaden lining is contorted out of all shape and use.

Returning to Paris by the Bois de Boulogne, we came upon a great scene of gaiety. Hitherto we had felt that the erst "gay capital" was much quieted down and depressed by its recent heavy trials; but this day happened to be the grandest of the race-days, and the myriads of vehicles that had conveyed the spectators were a marvel to behold. Fully three miles of road must have been filled with carriages, many of them very handsome ones too, crowded together as thickly as safety would allow; yet all down the Champs-Elysées they were just as numerous as ever; and arrived on the Boulevards, the loungers seemed in no way diminished. "Where *do* they all come from?" was our involuntary exclamation. The Bois de Boulogne looks much the same as before the war, and, excepting in some small portions, is very little injured; it has lost but an inconsiderable number of its trees.

Now that the Assembly holds its sittings at Versailles, the greater part of the palace is closed to visitors; a new, though painful interest is open to them, however,—namely, to enter the court and hear the Communist trials. The day we were there, a tall, youngish man, with rather a hang-dog look, and thick, light hair plastered sleekly down, was being tried for the murder of a simple citizen, named Roussel, and for robbing the body. He denied everything, and pleaded "mistaken identity;" but the poor victim's brother came in as a witness, and the culprit's conviction appeared certain. We did not wait to hear the end, but from what we were told a week later on a second visit to Versailles and the Trianons, we believe he was condemned. Satory, the scene of these military executions, is within a very short distance of Versailles. I should have liked to see the spot where poor young Lieutenant Rossel suffered so meekly the penalty of his mistaken patriotism; but the miserable weather prevented us from farther extending our journey. These executions still go on; four Communists were to be shot on the morrow of our visit.

The new grand Opera House in Paris is finished as to the exterior, but the interior remains uncompleted for want of funds. The inscription running along the main façade, which formerly read "Académie Impériale de Musique," has had the letters *Nation* substituted for *Impéri*; the alteration is perfectly visible from the slightly different colouring and thickness of the gilt-bronze letters. The "N" from the medallion above, has likewise been removed. This same littleness has gone on everywhere. In the *Panthéon*, the gilt wreaths, each enclosing an "N," have been taken down from the four corners of the transepts, leaving ugly blank spaces. At the *Hôtel des Invalides* at one end of the library is the copy of David's famous—but false—picture of "Napoleon crossing the Alps" (on a prancing charger, when it is well known he threaded the pass in the only possible manner, namely, on a mule); opposite this picture a portrait of Napoleon III. used to hang: now, a dark-green curtain fills the frame. The same eclipse has come over the semi-length portrait in the *Galérie d'Apollon* in the Louvre; so that its companion picture, Louis XIV., enjoys the undivided honour of presiding over this beautiful saloon of wondrous art-treasures. All the public buildings, even to the churches, have the sinister "*Liberté, Égalité, Fraternité*," painted on them in large black letters; and all are inscribed "Propriété Nationale."

Commenting one evening to a quiet, calm French gentleman on the hot haste with which Parisians, immediately one of their chronic fits of revolution seizes them, rush to alter names of streets, and to demolish statues and inscriptions of their last, but now deposed, demigod, he replied "*Nous sommes des fous*," and I think he was right. As I said to him, "However much they may break down and destroy, they cannot wipe out of French history the nineteen years in which the third Napoleon has ruled over them; nor would they, if they could, give up the advance in commerce, wealth, and civilisation they have made under his guidance; and what Government do they want now? The Republic will never satisfy them." "Nothing will ever satisfy them for more than about twenty years at a stretch," said he; "each generation, as it grows up, thinks it can make a better Government for itself; and as a generation grows up in eighteen or twenty years, so every eighteen or twenty years we have a fresh revolution. But now, things have come to such a pass no one knows what they do want; and Paris knows least of all." Two other well-informed gentlemen, one a Frenchman, the other an English resident in Paris, both said on separate occasions, "The Emperor has only to land to be welcomed back; if he were to come to Paris to-morrow it would be all right, and things would go on just as if all this had not happened." One Parisian gentleman certainly did say, "Why rebuild the Tuileries Palace? There is no use for it now." But so far as we were able to judge, from conversation with persons of various grades, the general opinion seems to be, that the Empire will be restored, and that it will be well for France when it is so.

The efforts of England to succour the famished Parisians when the siege was raised, do not appear to have left any very definite impression on the Parisian mind. To test this, I made many opportunities of saying how sad we English people were to hear of the hunger and suffering in Paris; but not from any one person, gentleman, shopkeeper, or valet-de-place, did I elicit the ghost of a grateful remark for our intervention. I know not if the sentiments of the upper classes are reflected in the behaviour of the lower, but if so, the following incident, unimportant in itself, bears some weight. One evening, at the Odéon, one of the women-boxkeepers came to ask if we had paid for the little wooden footstools that are placed in French theatres. She was behind us, and three or four rows off, so we did not at first perceive that she was addressing herself to us. Presently she exclaimed aloud, "*Oh! comme ils sont imbéciles, ces Anglais.*" My English blood fired up in a moment, and, turning full round, I replied to her, also aloud, "*Non, madame; ils ne sont pas imbéciles, ces Anglais, mais ils ne vous ont pas bien compris.*" She was cowed immediately. And a French gentleman and lady who sat close behind us never interfered to stop her insolence or explain the matter to the strangers. So much for Parisian politeness!

A more pleasing topic is the "Book of Gratitude,"—if I may be allowed thus to designate it,—now lying for signature in the Rue Vivienne. As is known, this book is intended to commemorate the exertions of England in behalf of smitten France, both in giving her food for her famished people, and grain to sow her devastated fields. The separate leaves of the book consist of large sheets of cardboard, each having a handsome engraved heading, and which are to be filled up with the autograph signatures of persons of all classes who benefited from, and are grateful for, the timely help England bestowed. The whole of the shop is given up to this purpose, and large legibly inscribed notices, in terms most gratifying to English hearts, announce the intention of the originators of the book.

R. F. H.

## SCHOOLS FOR THE LONDON SCHOOL BOARD.

COMPETITIVE designs for no fewer than six schools, and all by different architects, have been exhibited, for a couple of days, to the competitors and others in the top room of the Sunday School Union building, just opposite Newgate, in the Old Bailey. Whether or not the School Board intended to keep out the press we can scarcely say. If so, it ought to be made clear at once, so that the ratepayers might have their say upon it. We can scarcely suppose that such a decision could be arrived at by a popularly-elected body, including, for example, Mr. Hepworth Dixon; but certain it is that, so far as we are concerned, we received no invitation from the Board to view the drawings, and a wonderful discussion, at a meeting of the Board, has been reported as to whether or not the designs for the Stepney School, already referred to in our pages,* had been seen by "a member of the press." The Board seemed all at sea on the point, as they apparently are on some other points. When, by accident, we went into the room in the Old Bailey last week, there were, not merely *a* member of the press, but at least four persons connected with a press of some sort or other, examining the drawings, including the acknowledged reporter of one of the daily papers, who appears to have been betrayed into a very one-sided account. The Board are about to spend, and we are glad of it, thousands upon thousands

* See pp. 361, &c., *ante*.

of the ratepayers' money; and they will ill-discharge their duty if they do this on unseen designs, framed on unventilated principles. On these six schools alone some 50,000*l.*, at least, exclusive of the cost of land, will be expended, with about 1,100*l.* more for the Stepney School, already decided on; and it would ill become them to attempt to do this and all that is to follow, with the public in the dark.

That considerable obscurity on several points prevails is obvious. The Board say, in the Rules to be observed in Planning Schools issued by them,* that the lighting of class-rooms should, if possible, be chiefly from the side; and yet, acting on supposed instructions to follow the Prussian system, several of the competitors here, as in the case of the Stepney competition, place the children with the light to their back.

Again, the Stepney School is made to include, at a considerable increase of cost, a large general room, or hall, capable of containing the whole of the boys and girls at one time. If this be desirable, why is it not provided for in these six other schools? If not desirable, why is it provided at Stepney? These circumstances seem to us to show that inquiry and discussion are necessary.

We give the names of the architects who have sent in designs for the several schools:—

*St. Paul's-road, Limehouse.*—Mr. Phené Spiers, Messrs. Slater & Carpenter, Mr. Bracebridge, Mr. Alfred Porter, Mr. A. Williams, and Messrs. Spalding & Knight. The tenders accompanying designs range (not necessarily in the order of the names) from 5,950*l.* to 8,450*l.*

*Mary-street, Bromley.*—Mr. Lacy Ridge, Mr. T. H. Watson, Mr. J. W. Morris, and Messrs. Mileham & Kennedy. Tenders from 4,900*l.* to 6,746*l.*

*Old Castle-street, Whitechapel.*—Mr. E. C. Robins, Mr. Aldwinckle, Mr. E. Biven, Messrs. Tarring & Son, and Messrs. Habershon & Brock. Tenders from 6,750*l.* to 8,500*l.*

*Battersea-road.*—Mr. Edis, Mr. Gordon Stanham, Messrs. W. M. Teulon & Cronk, Mr. J. Toner, and Mr. Coldwell. Tenders from 5,850*l.* to 7,000*l.*

*Essex-street, Tower Hamlets.*—Mr. Charles Barry, Mr. Hennell, Mr. Quilter, Mr. T. Lewis Banks, and Mr. John Young. Tenders from 4,850*l.* to 8,000*l.*

*Kender-street, Hatcham.*—Mr. E. Wyndham Tarn, Mr. John Giles, Mr. Joseph Gale, and Mr. J. P. Seddon. Tenders from 5,400*l.* to 7,902*l.*

## SEFTON PARK, LIVERPOOL.

PRINCE ARTHUR has been in Liverpool, and on Monday last opened Sefton Park, which, as our readers may remember, has been in progress since 1867. There was an enormous crowd, and the enthusiasm was remarkable. The streets were gaily decorated, partly by voluntary efforts and partly otherwise. We learn that the decorative committee, which was appointed some time ago, and of which Mr. Paris acted as chairman and Mr. Holden as honorary secretary, by the aid of liberal contributions on the part of tradesmen and other inhabitants, did a fair share in the decoration of the streets, especially in the neighbourhood of the Town-hall, Castle-street, Lord-street, Church-street, and Great George-street. In order that the display might be as excellent as possible, they contracted with Messrs. Pigott, Brothers, of London, who did part of the work of decoration in London on the occasion of her Majesty's state visit to St. Paul's Cathedral, and some of the materials used in the streets of the great metropolis upon that day were brought into use in the streets of Liverpool in the reception of her Majesty's son. The committee also engaged the services of Mr. Edward A. Heffer, architect, to superintend the decoration. The materials used were Venetian masts, 40 ft. high, painted blue, each mast being decorated with a trophy of five flags and a shield, and a banneret floating over the top. Suspended from the masts were festoons of coloured paper roses, which were carried over the lamp-posts along the sides of the streets, the length of festooning being one mile and a quarter. At various parts of the route arches (ten in number) were erected, which were also adorned with trophies of flags, and about 200 trophies of flags and shields were affixed to the fronts of buildings. Some of the large street-lamps were also decorated by the committee.

We leave the park itself for a personal view, and add merely some statistics from the *Mercury*. Under the Improvement Acts for Sefton and Stanley Parks, the corporation obtained power to raise 575,000*l.*, and of this amount probably more than 400,000*l.* will be devoted to the purchase and completion of Sefton Park. The cost of the land was 275,865*l.*, and it is fully expected that about 145,000*l.* will be expended on labour and materials before the park can really be said to be finished. The late Mr. Newlands estimated the cost at 450,000*l.*; but it should be remembered that many of the most costly items in the design on which that estimate was founded have been entirely erased from the plans, and the most rigid determination, as far as possible, to economise, has been enforced by the committee, in consequence of the outcry of the inhabitants against the alleged extravagant expenditure. It will be remembered that when Birkenhead Park was carried out the building sites around it were sold for an amount which almost recouped the sum spent upon the park. It was therefore determined to adopt a similar plan with regard to Sefton Park, and it was fully expected that the corporation would be reimbursed at least 200,000*l.* Building plots, containing in the whole about 120 acres, were arranged on the outskirts of the park; but although the sites have been twice offered to public competition, only ten of the plots have at present changed hands.

Messrs. André & Hornblower were the architects and designers; Mr. Samuel Campbell was contractor for sewering, road-making, and the heavier excavation; Mr. Dickon for the formation of plantations, slopes, &c., and the subsoil ploughing; Mr. Pearson Lee for the stone plinthing; and Messrs. Pollard & Cunliffe, of Burnley, provided the iron railings. About two years since, however, a dispute arose between the architects and Mr. Campbell, one of the contractors, and the contract of that gentleman was determined. Shortly afterwards the Improvement Committee determined the contract with Messrs. Hornblower & André; but the modified designs of those gentlemen have been carried out. The works have since been carried on by Mr. Dickon, under the immediate supervision of Mr. William Pearse, who has officiated as acting clerk of the works since their commencement.

* See p. 349, *ante*.

## SCHOOL BOARDS.

*Walsall.*—Mr. Bidlake, architect, attended the last monthly meeting with plans and specification for the erection of the Board school at the Wisemore, which were approved, and advertisements were ordered to be issued inviting tenders for the building of the schools.

*Heckmondwike.*—It has been resolved to erect a school on a site already chosen in Battye-street, to accommodate 200 boys, 200 girls, and 150 infants.

*Dewsbury.*—The building committee have reported that they have instructed Messrs. Holtom & Connor to prepare plans and specifications for the Education Department for three schools, one at Dewsbury Moor, one in Boothroyd-lane, and a third in Carlton-street. The estimated cost is 6,800*l.*, and the architect's terms are 5 per cent. on this amount, and no commission for extras. The report was adopted.

*Tynemouth.*—The Committee of the Council of Education have approved of all the schools built in all the villages by this Board, and it has been agreed to seek power to borrow from time to time 18,000*l.* to complete these erections.

*Canterbury.*—The following tenders were received for the erection of the master's house: John Chandler, 371*l.*; Gaskin & Godden, 330*l.*; Cozens, Brothers, 442*l.* 15*s.*; W. Gentry, 433*l.* A difficulty arose in connexion with the tender of Messrs. Gaskin & Godden, owing to their stating that they would perform the work as set forth in the plans and specifications for the sum named, this sum to be added to their tender for the schools without deduction.

*Liverpool.*—At the last meeting the Chairman moved the following resolution, which was agreed to:—

"That the 'rules to be observed in the planning and fitting-up of schools,' and the 'conditions of competition for school-houses,' the one for 700 and the other for 1,000 children, as passed by the school organisation and management and the sites and building committees, be recommended to the Board for adoption, and sent to the Education Department for their approval."

The Chairman also proposed:—

"That in future the sites and building committee be authorised to draw up the conditions and particulars for the erection of schools on the basis of the aforesaid rules, and to issue them to architects without previously submitting them to the Board."

Mr. Hubback said he should certainly object to any more schools being built upon the basis referred to. If he understood it aright, in schools for 1,000 children the largest room would be for 120 children; and in schools for 700 children the largest room would be for 80; but he thought that it was desirable that in Board schools there should be a room where the great majority of the children attending school could be assembled together. A very great benefit might be conferred upon the children thus assembled by lectures and amusements; but if a school were cut up into a great many small rooms the advantage arising from having an opportunity of bringing all the children together was lost. The chairman said that the passing of the resolution would not take away from the Board the careful examination of the plans which would be submitted for selection and approval. The reason why the resolution was submitted was that they had now sites for two schools, and they were expecting very shortly to have another. The Board had only committed itself at present to erect schools for 6,000 children, and before anything could be done in the way of purchasing sites for the building of schools, the Board would have to consider how much further they would go in the erection of schools. They could not wait to see those two or three schools erected before they determined to erect others, and therefore the resolution was placed before the Board in order that there might be no unnecessary delay. As to the plans for schools, the Board adopted a system of triple classification, and that was the system adopted by the London School Board. By that system there would be a classification of infants, juniors, and senior pupils. Thus the power of division and separate teaching would be greatly increased. He could not conceive that any great advantage could be gained by bringing infants, junior, and senior children,—all of different ages and different degrees of intellectual attainment,—together in one mass for any one purpose whatever. On the suggestion of Mr. Yates the following words were struck out of the resolution:—"And to issue them to architects without previously submitting them to the Board." The resolution was then passed as amended.

## TURNER'S DRAWINGS.

THE interesting particulars furnished in a recent number of the *Builder*, of the extraordinary bound in the prices realised by Turner's drawings at the Gillott sale, as compared with the sums originally paid to the artist for "Bamborough Castle," and I presume "Powis Castle" (though the title is not given) must have fairly taken away the breath of "J. H. M.," their original owner. An advance from the first purchase sum of 170 guineas for the two pictures to 4,360 guineas, does indeed seem a leap almost fabulous. Yet, great as this difference is, its proportions were reached in the cases of several other artists whose works were sold in the same collection. The small picture by Müller, entitled the "Chess Players," realised no less than 3,950*l.*, and there is excellent authority for stating that the artist himself received only 35*l.* for his labour. Again, from the small prices known to have been paid to David Cox in his day, it is more than probable that the painter did not receive a higher reward for the picture of "Peace and War" than Müller obtained for his "Chess Players," yet its possession was keenly contested up to the purchase price of 3,430*l.* Turner's picture of "Sheerness and the Isle of Sheppy," formerly the property of Mr. John Newton Hughes, of Maidstone, was sold by Messrs. Christie & Manson, in 1848, for 565 guineas; resold at the Gillott sale by the same auctioneers, this picture shot up to 4,350 guineas. The names of many other artists might be cited, who, when in the flesh, barely obtained a competency, but whose pictures, now that their epitaphs are cut in stone, bring fortunes to their lucky owners. All this is startling enough, but it becomes almost sensational when "J. H. M." informs us of the discovery he made that the drawing which he had purchased from Turner for "sixty or seventy pounds," "had greatly faded" "in perhaps a year" after it came into his possession. Yet some one of "the over-rich collecting people" was found wild enough to secure it at the Gillott sale at the modest advance of 1,210 guineas. "Those who knew me, at the time when I made the discovery of the fading of the drawing in question," adds "J. H. M.," "know that I made no secret of it, but spoke

out at once to my numerous Turner-collecting friends," to dissuade them from squandering their means, no doubt, on anything so ephemeral and valueless as the drawings of Turner must become. I do not doubt for a moment the statement of "J. H. M." that the drawing named has suffered from some influence or other; but the general condemnation involved—of the want of permanency in Turner's drawings, and, by implication, of water-colour art,—may be fairly questioned. No doubt many of the early works of the founders of the water-colour school have given way from causes now well understood. We have only to turn to the "Manuals of Instruction," and "Modes of Preparing Colours," published at the beginning of the present century, to learn the number of fugitive vegetable extracts that were then employed. With no better materials at command, anything like durability could not be expected. But, as the young art gathered strength, so the manufacture of colours improved; and, the painters themselves advancing in knowledge and experience, cast out from time to time the less durable colours, for the more permanent pigments which were gradually introduced. The practice of Dewint may be taken as an example. In his early time he was particularly fond of a mixture of Indigo and Indian red, or Payne's grey, which he used very freely. The result may be seen in many of his works—the blue has entirely disappeared, and the Indian red alone remains, in foxy granules, on the surface of the drawings. Later in life, the artist discovered the cause of this defect, and avoided it in the future. It is now well known to every water-colour painter, that a vegetable blue mixed with Indian red will not stand the test of time. But it cannot be fairly reasoned that inexperience, in particular instances, touches the general question of the durability, or impermanency, of an art which, in some form or other, is probably the oldest form of painting known. The MSS. of the twelfth and thirteenth centuries, illuminated on paper, are in excellent preservation, and the materials then employed appear not to have been very dissimilar to those now in use. Raffaelle's cartoons, in water-colours, have existed for nearly 400 years; and we know how little care had been bestowed on their preservation up to the time when Rubens dragged them forth from the cellar into which they had been cast, to adorn the Palace of Charles I. It may suggest some curious reflections on the recent prices paid for modern works of art to know that Raffaelle only received 15*l.* each for his cartoons, which were executed for Leo X., about the year 1515–16, as patterns for tapestries. No doubt, there are many drawings to be met with which have suffered from special causes,—Turner's, amongst others,—but there is so much fine work of his remaining, pure, beautiful, and unchanged, that it is fair to presume that the fading is not often independent of the careless way in which they have been displayed,—too frequently on damp walls, or exposed to the direct rays of a blazing sun. Of the numerous fine works by David Cox, or of those of William Hunt, most perfect of their kind, it would be difficult to recall a single example evidencing signs of decay. The question of durability, however, is one purely relative, and of degree. And if we turn to the contemporary pictures, *in oil*, of the painters, blackened, horny, and split into destructive fissures, as so many of their canvasses now appear on the walls of South Kensington Museum, the painters in water-colours may take heart, and even point with pride to Turner's drawings, as being, at least, as free from change as Turner's pictures in oil.

J. J. J., Garrick Club.

## THE INDUSTRIAL HOME FOR DISCHARGED FEMALE PRISONERS AT WAKEFIELD.

THIS home has been formally opened. It is oblong in plan, with a frontage bow near the orchard of 163 ft., and a depth of 39 ft. The principal portion, being three stories in height, is arranged on each side of a wide central corridor, lighted by a large window at the end and staircase windows at the sides. The staircases are of stone, the one in the centre of the building being for the use of the inmates and visitors; the other for the matron. The ground-floor of the house is appropriated to rooms in which the actual work of the institution is carried on. At the north end is the wash-house, which has an open roof, skylight, and louvre ventilator at the top. Adjoining this is the drying-room, with clothes-horses, made to draw in and out from a heating-closet. Next in order are the laundries or ironing-rooms. The inmates' dining-room, kitchen, and scullery occupy the remainder of the garden-front, with store-rooms and cook's pantry on the opposite side of the corridor. An office for the matron adjoins the entrance, and has full command of the ingress and egress of the inmates. On the first floor, near to the principal staircase, is a large day or class room and dormitory. On the floor are placed the committee-room, clothing-stores, lady superintendent's sitting-room, and visitors' bedroom. At the south-east end of the building is a dormitory, with bath-room adjoining. The second floor, with the exception of the chapel, is devoted to dormitories, and it is so arranged that about half of the inmates shall occupy single bedrooms, and the remainder be placed in large dormitories, with a matron's bedroom adjoining and opening into each. The chapel is 18 ft. wide, and extends the whole width of the north end of the building. The extreme plainness of internal finishing observed in other parts of the building is also carried out in the chapel. The roof-timbers are all visible, and are stained a dark colour. The east window is of painted glass, from the works of Messrs. Hardman & Co., Birmingham. The style adopted by the architect, Mr. Swinden Barber, of Halifax, is in character with many buildings we see in this part of the West Riding which were built about the latter end of the seventeenth and commencement of the eighteenth centuries,—low-pitched roofs, long ranges of mullioned windows, and continuous strings being the leading features. The principal difference between this and the old buildings is, that the latter were always built of stone; whereas this is brick and stone combined. On the question of style of elevation being discussed, Col. Akroyd offered to defray the difference of cost between a perfectly plain elevation, like the old Home, and that which we now see. The result of this outlay of 300*l.* is the only evidence of decoration in the building. The work was done by Mr. Green, builder, Wakefield.

## THE PHYSICAL COMMOTIONS.

DURING a recent thunder-storm the lightning struck the steeple of Wadhurst Church, splitting the ball, shattering the lead at the top, and tearing off a large quantity of the shingle at the north side, scattering it all over the churchyard; some of it being thrown a distance of 30 yards. The damage is estimated at close upon 100*l.* On the same day the tempest raged with great severity in Romney Marsh (near Rye), where two sheep and a horse were killed, and a young man's clothes in front of his body crumbled like tinder, and his chest had the appearance of having been acted upon by a mustard-plaster.

Great alarm was caused among the volunteers of Dorchester on Monday by a startling occurrence during the manœuvres of the corps on an open spot near that town. A high column, known as the Blagden Monument, stands on the plain, and the corps was mustered near to it, when a heavy thunderstorm burst over them, in the midst of which a vivid flash of lightning, accompanied by a fearful crash, struck the monument. Five volunteers who were in rank near to it, were struck to the ground, and found to be much burnt, two of them so severely that they had to be conveyed to their homes.

At a farm named Lomax's, occupied by John Nuttall, at Pilsworth, about two miles from Bury, and on the estate of Earl Wilton, the chimney on the western gable of the farm was struck, and damage amounting to between 100*l.* and 200*l.* was the result. The chimney-stack was completely demolished, the roof was smashed through, and nearly one-half of the thick brick-work of the gable-end was ruinously demolished or shaken. Other damages were done.

There has been a supposed earthquake at Sunderland, testified from several parts of the town and neighbourhood, "unless it was an explosion in one of the neighbouring collieries."

Several violent shocks of earthquake have occurred at Accra, in West Africa, causing considerable damage. Many of the houses were rent to pieces, and completely destroyed, whilst others were cracked in several places. Fortunately, the most serious shock was preceded by minor ones, which alarmed both the European and native residents, who had time to pack up and escape before the houses tumbled down, and consequently but few serious and no fatal accidents occurred, although the earthquake took place in the middle of the night.

Letters from Aleppo give a distressing picture of the state of Antioch. The town where the disciples of Jesus were first called Christians is now a mere heap of ruins; and as shocks of earthquake still continued, and the soil was, as it were, quivering with volcanic movement all round, people were afraid to approach the site to remove the large number of dead who lay unburied. The Turkish Government had sent 3,000*l.* for the sufferers from the earthquake at Antioch.

It is to be hoped that the dominant cause of the commotions which were increased last year, as in 1867, has expended its force, whatever that may be. If so, the human race will be saved another catastrophe, this year, such as that of 1868. In the present instance, although California has again been shaken, the commotions appear to be more vigorously manifested in the Old World than the New.

## SALE OF THE POULTRY CHAPEL AND SCHOOLS.

ON Tuesday the Poultry chapel and schools, well known as one of the oldest blocks of property of its kind in the City, and which is freehold, were disposed of by public auction by Messrs. Debenham, Tewson, & Farmer, of Cheapside. The property occupies an area of 7,440 square feet. The first bidding was 30,000*l.*, which was quickly followed by successive advances, and ultimately the property was knocked down for 50,200*l.*, representing about 7*l.* a foot. It was stated at the sale that the gentleman to whom the property was knocked down represented the directors of the London Joint Stock Bank, whose premises adjoin the Poultry Chapel, and that it is their intention to erect a new block of buildings on the site in connexion with the bank. The trustees of the chapel have secured a larger site near the Holborn Viaduct, on which they are about to erect a new chapel and schools.

## CHELSEA OLD CHURCH.

SIR,—I happened to see to-day the paragraph in your paper of May 11th, on the "Progress of the Chelsea Embankment," in which it is stated that "next week an important sale of property required for the new Embankment will take place." That sale has been accomplished, and I am informed that one of its conditions is, that the houses sold are to be cleared away within a fortnight.

A host of your readers must be aware that this property comprises the archway of the two little narrow streets going westward from the old church of Chelsea to Battersea-bridge. They will also be aware of the prominence which this removal will give to the well-known church, so long, I may say, buried in obscurity, without one decent approach to it. I have accordingly thought it my duty to appeal to the public to assist me in preparing this most interesting edifice for the new position it will hold. Not that I want to modernise it in any way; such an idea is as far from my mind as it could be from that of any lover of antiquity, for the great charm of this church is its character as the old village church, and as long as it stands it must continue to recall the past history of Chelsea, whose pages will always have an honourable place in the records of England's literature. Associated with the old church are the names of Sir Thomas More, of Swift, of Attenbury, of Littleton, of Sir Hans Sloane, and others in the same category. Within it are monuments to families of note, such as the Duke of Northumberland (of the Dudley line), Lord Derby, Lord Dacre, Lady Cheyne, and Sir Thomas Lawrence. In fact, there is no professed antiquary who would not find connected with this church a source of contemplation all-sufficient to repay a visit.

When I was appointed to the incumbency in 1855, I set to work to repew the church, and make it what I found it not, a proper place of worship. Since then, however, time has done its work, and there is need of some substantial repairs, as well as improvements internally for the comfort of worshippers.

I have, therefore, again made a move to get funds for this object, and if you will kindly permit me, through your pages, to make my efforts known, I doubt not some of your readers who are acquainted with the church and its history will come forward to help me.

R. H. DAVIES, Incumbent.

178, *Oakley-street.*

## THE BREAKWATER OF THE FUTURE.

SIR,—Having had an opportunity of observing, during the last three winters, the manner in which the harbour works now being constructed in the Bay of Wick have been attacked by successive storms, and the manner in which the various modes of construction adopted from time to time have successively given way, in a great measure at least, before the fury of the storm,—in consequence of the disinterested liberality of the British Fisheries Society, the tentative process is still to be carried on as heretofore; but the probability is that the money at the disposal of these generous experimenters may be exhausted before sufficient experimental knowledge can be obtained to enable a fair start to be made with brighter prospects for the future, could sufficient funds be forthcoming when the experiments have been completed.

Attempts have been made to bind the upper course of stones by longitudinal and transverse bars of iron let into the stone and cemented over; but these efforts have been as futile as the attempt to bind Samson with the seven green withs.

The experiments, as far as they have been carried out, have resulted in establishing the superiority, over the present mode of construction, of large blocks of Portland cement concrete under low water, and concrete deposited in mass as soon as possible above low water to the required height. This, however, may or may not be acted upon, should the works be carried farther seaward.

It would appear that the next experiment to be tried is, "To deposit blocks of cement rubble, 80 tons to 100 tons weight, outside of the wall, which would not only protect the wall itself, but tend to tranquillize the water inside of the harbour." How these blocks, deposited outside of the wall, can tranquillize the water inside of the harbour is not stated.

To deposit a considerable number of concrete blocks to seaward of the wall will virtually be forming a sea slope to the upright wall, and, should this experiment succeed, which, for obvious reasons, is not at all probable, it would establish the principle that the upright wall from low water to the top must be abandoned, and a parabolic or cycloidal curve adopted for the upper portion of the sea face of the wall. The slope, however, must be an integral part of the work combined in a homogeneous mass, and not laid up against the work as a sort of independent shield which will be used by the waves not as a shield, but as a battering-ram or wave-hammer, to pulverize the brittle slaty stone in the sea face of the work. The waves in the recent storm are said to have been *thirty feet high*. This will take some of the students of wave-ology by surprise: a 30 ft. wave in 30 ft. depth of water will be looked upon as a modern discovery, or as a modern *invention*.

Any careful observer of the action of the recent storms against the vertical wall must regret that the experiments have not been sufficiently varied to decide the question of an upright wall as against a wall with the sea face above low water rounded off as above proposed.

In the recent storms, the waves dashing against the upper portion of the upright wall, sent a dense column of water to the height of some 50 ft. or 60 ft. This column of water is the resultant of the wave-blow, and the reaction of the blow against the upright wall, and its height, is the measure of the intensity of the blow; but if this blow were deflected by a plane oblique to the line of impact of the blow, the intensity of the blow would be diminished in proportion to the increase of the angle of incidence. Ask the captain of an iron-clad whether he would like the shot of his antagonist to be delivered perpendicularly to his broadside, or obliquely to it; he would certainly prefer the latter, and the more oblique the better he would like it; but the hydraulic engineer says, let me receive the motion of this monster 30 ft. wave by a direct negative—the blow is delivered, the water flies upwards, and the wall tumbles downwards.

It is a pity that these experimental works have not been directed more particularly to the solution of this unsolved problem.

These remarks may serve as a sort of practical introduction to the following proposal for the construction of a harbour of refuge, composed entirely of concrete blocks. I propose that the blocks should be hexagonal, with the exception that they lock into one another and break joint. After a careful deposit of the lower course, the blocks could easily be lowered into their place, and form a compact wall. Indeed, the outer joints could easily be caulked, and liquid cement injected into the internal joints, so as to consolidate the whole into one compact mass. The blocks should not be less than 200 tons weight, and formed on inclined planes, above high water, and launched into the sea, to be laid hold of by the twin barge. This barge should draw as little water as possible when loaded, and should be propelled by steam, with twin screws or detached paddle-wheels, and also supplied with steam lifting appliances. The blocks, of course, may be made of any form, provided that they articulate well into each other, break joint, and are easily deposited.

ALEXR. DOULL.

## COLTMAN-STREET WESLEYAN CHAPEL AND SCHOOLS, HULL.

THIS edifice has been opened for Divine Service. The plans of the new building were made by Mr. Wm. Botterill, of Hull, architect. One-fourth of the total estimated expenditure was, according to the rules of the building committee of the Conference, allowed to remain as a debt on the premises, leaving 5,925*l.* as the total sum immediately required.

The site of the new building is near to the centre of Coltman-street, on the eastern side, with a frontage of 100 ft., and an area of 2,880 square yards. The structure is in the Decorated Gothic style, built of Gainsborough white stock bricks, with Ancaster stone dressings. It is placed 27 ft. back from the street line, giving a spacious area in front of the principal entrances, enclosed by a dwarf wall, with iron railing, gates, &c. The principal, or Coltman-street, elevation exhibits three entrance doorways, having moulded pointed arches, or polished Aberdeen granite shafts, with carved stone capitals. The entrances open into a spacious vestibule, from which are lobbies, for intercepting draught, communicating with the aisles on the ground floor of the chapel. The vestibule is flanked by staircases of ample width and easy access to the galleries. Behind the chapel, and connected therewith, but of somewhat plainer character, is a block of school and class-room buildings, vestries, &c. The internal dimensions of the nave of the chapel are as follow:—Length 90 ft., and breadth 47 ft.; the transepts are 25 ft. by 15 ft. 3 in. each. There are galleries on three sides of the chapel, with four staircases, giving facility of ingress and egress. The roof of the chapel is open to the collar-beam, and is of hammer-beam construction, with the ceiling boarded. The height of the wall to the springing of the roof is 27 ft. from the chapel floor, and 46 ft. to the ceiling over the collar-beam. All the pews and fittings of the chapel are in pitch pine, varnished, with the exception of the pulpit, which is a costly piece of workmanship in English oak, elaborately carved, being a memorial of the late Mr. Thomas Holmes. In rear of the chapel are schoolrooms 48 ft. 9 in. by 28 ft., and 48 ft. 9 in. by 38 ft., together with 13 class-rooms and vestries. The whole of the buildings are heated by Perkins's hot water apparatus, and the lighting is by coronæ and bracket lights of mediæval design. There is accommodation in the chapel for 1,200 persons. The cost of the whole of the buildings will be about 8,000*l.*, of which a considerable sum has been raised. The works have been superintended by Mr. James Griffith; Messrs. W. & J. Hall being the general contractors, except for the slating, which has been done by Messrs. Dauber & Son. The stone carving has been executed by Mr. Thomas Firth, and the wood carving by Mr. Matson; the gas-fitting by Messrs. Stone, Settle, & Wilkinson; the painting by Mr. W. Wardell; and the wrought ironwork by Mr. W. B. Leaning, all of Hull.

## BUILDING APHORISMS.

I.

THE richest crop, for any field,
Is a crop of *bricks* for it to yield.

II.

The richest crop that it can grow,
Is a crop of *houses* in a row.

A. H.

**The Natural History Museum, South Kensington.**—The drawings for this structure, to be erected from the designs of Mr. Waterhouse on the site of the 1862 Exhibition-building, are now ready, and the "quantities" will be issued in a few days to those intending to tender.

## THE SOURCE OF SAND.

THOSE of your readers who are interested in geological matters will readily admit the importance of a hint that will assist them in determining the source from which a particular bed of sand or sandstone has been derived. How to discriminate between sand produced by the breaking up of quartz, and sand produced by the breaking up of flint, does not appear to be generally understood. Chemical analysis gives no assistance, and when examined microscopically by ordinary light, no difference can be detected. Polarized light, however, differentiates these two substances in such a decided way, that where they alone are concerned no doubt can remain for an instant as to whether a grain of sand consists of one substance or the other. The quartz, as of course everybody knows, is resplendent with prismatic colours, while the flint shows a cold, steel grey surface covered with a peculiar marking, which I am obliged to call a species of reticulation for want of a term more exactly descriptive. This marking I consider to be indicative of something in the structure of the organism replaced by the flint. When once seen it is readily recognised. Some species of chert,—that from the Portlandian beds, for instance, whose formation is probably due to a similar cause,—show the same marking as flint.

The proportion of flint to quartz in the Thanet sands, in the Bagshot sands, and in other deposits may thus be readily seen.

M. HAWKINS JOHNSON.

## THE LIVERPOOL SEAMEN'S ORPHAN INSTITUTION.

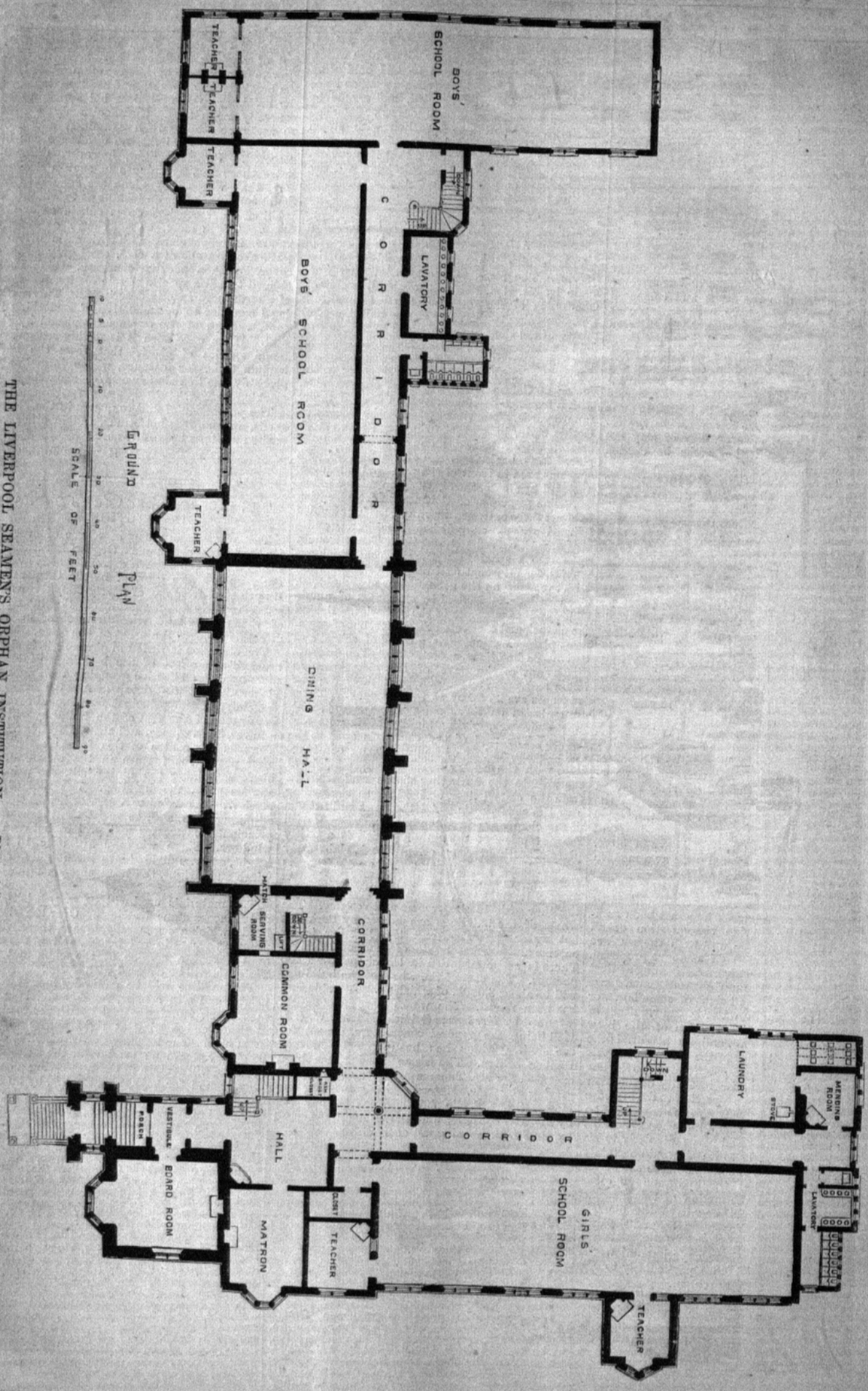
THE new building, now in course of erection, for the Liverpool Seamen's Orphan Institution is situated near the eastern extremity of Newsham Park, upon a site granted by the Corporation. Its principal frontage, of nearly 300 ft., runs in a south-westerly direction towards the fine sweep of rising park-land which stretches in that direction towards the heart of the town.

The elevation is varied in outline; indeed, the architectural effect of the building will depend more upon its effective grouping than upon the elaboration of its details. At the southern extremity of the principal façade, and standing in advance of the rest of the building, will rise a tower, 25 ft. square, and about 120 ft. in height. Towards the centre of this front is the next most prominent feature in the elevation, the block containing the dining-hall, the principal apartment in the building. The roof of this block will be carried to a greater height than the adjoining roofs, and, to resist the thrust of the principals, buttresses will project between the windows. These windows are over 16 ft. in height, and are divided into three lights, both in width and height, the head of each light being trefoiled.

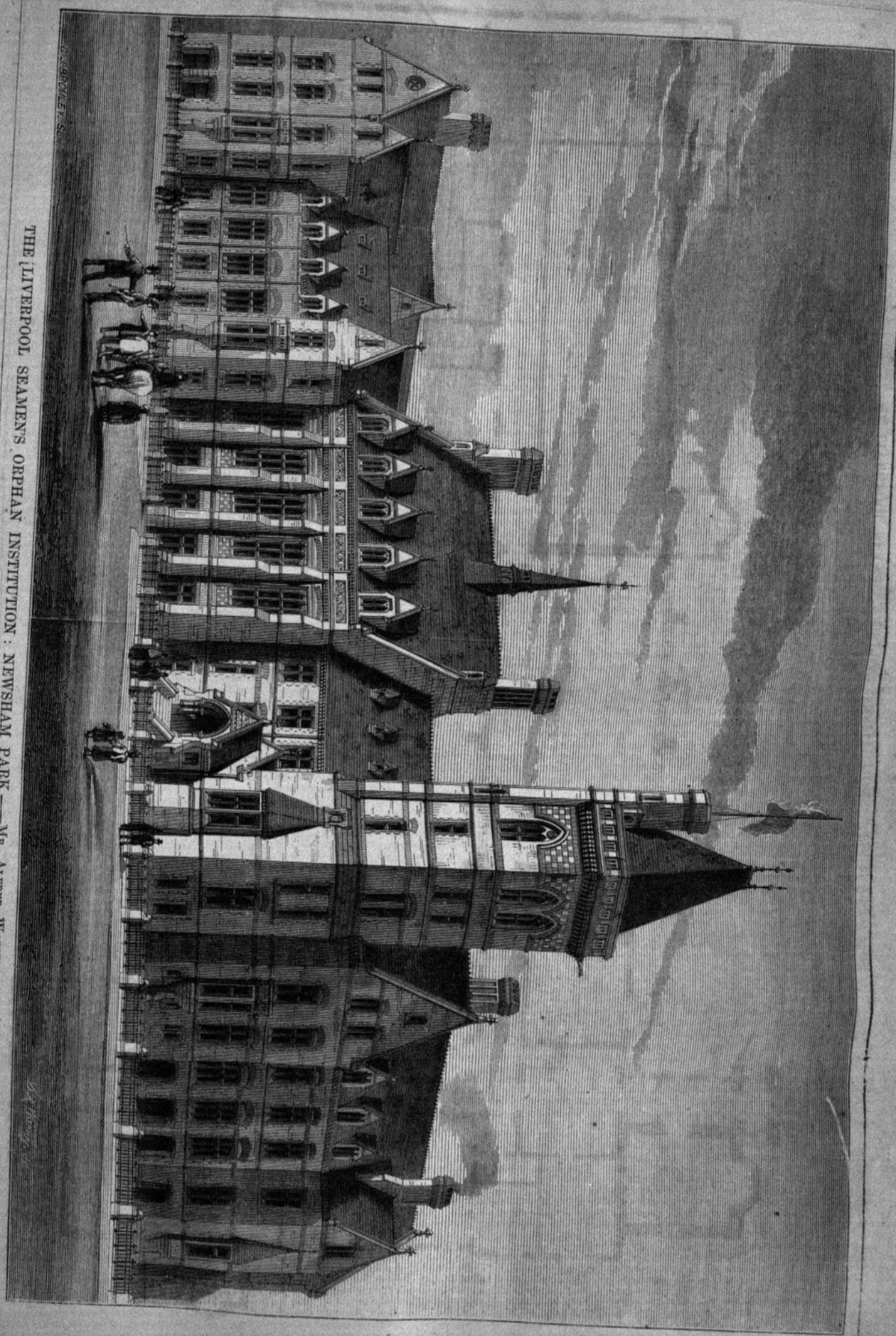
The materials used will be grey bricks, with red Runcorn stone dressings. Over the window-heads, which are generally square, there will be relieving arches in red bricks, and at the eaves of the roof a cornice of the same materials. The roofs will be covered with slates.

The building will be generally four stories in height, and will consist, roughly speaking, of a main block running parallel with the road, and at either end a wing at right angles with the main block. The basement floor, which it should be observed will be level with the surrounding grounds, will contain in the north wing a covered play-ground for boys, about 90 ft. by 30 ft.; in the south wing a similar play-ground for girls, and the laundry department; and in the central block, the kitchen and other needful offices; a swimming-bath, and a boys' workshop of about the same dimensions as their play-ground. The main floor contains the dining-hall, 70 ft. by 36 ft., by 30 ft. high; two school-rooms for boys over their play-ground and workshop respectively; one similar school-room for girls, and the necessary accommodation for the administrative department. The first and second floors are mainly appropriated to dormitories, there being four dormitories for boys, and two for girls, each dormitory being capable of accommodating about seventy children.

The cost of the entire structure will somewhat exceed 20,000*l.* The general contractors are Messrs. Haigh & Co. Messrs. Haden, of Trowbridge, will warm the building throughout by means of their hot-water system. The architect is Mr. Alfred Waterhouse.




THE LIVERPOOL SEAMEN'S ORPHAN INSTITUTION.—*Plan of Ground Floor.*




THE LIVERPOOL SEAMEN'S ORPHAN INSTITUTION: NEWSHAM PARK.—MR. ALFRED WATERHOUSE, ARCHITECT.

## THE TRADES MOVEMENT.

*London.*—On Saturday night last, a crowded meeting of delegates from the carpenters and joiners in the various London building firms was held at the Brown Bear, Bloomsbury, for the purpose of deciding upon the firms where the men shall be called out on the 1st of June next, in accordance with the resolutions adopted at the aggregate meeting of the trade in St. James's Hall, on Tuesday night last. Mr. Sadler occupied the chair. A report was brought up from the Nine-hours Committee on the present position of the movement, and recommending the names of several firms for the delegates to decide upon two out of the number, when action should be taken on Saturday, the 1st of June, unless in the meantime some overtures were received from the Masters' Association. After considerable discussion it was resolved that the workmen in the employ of Messrs. Jackson & Shaw, of Pimlico, and Messrs. Brass, of Old-street, St. Luke's, should wait, by deputation, upon their respective employers, and inform them that they should leave their employ upon Saturday, June 1, unless they complied with the terms contained in the men's memorial. The delegates from those firms stated it as their opinion that the decision of the meeting would be promptly complied with. It is stated that a meeting of the Associated Masters has been held since the meeting of the men, in St. James's-hall; and that after considerable discussion it was resolved to meet the withdrawal of the men from any particular firm or firms by a general lock-out so far as the firms connected with the Association were concerned. It is also stated that many of the members were in favour of a compromise by meeting the demands of the men for 51 hours per week at 9d. per hour, with a counter-proposition for 54 hours at 8½d. per hour, which would be a reduction of 2½ hours on the present working week, and 0½d. advance in the rate of wages per hour.

*Sheffield.*—The Sheffield masons, to the number of nearly 300, have struck work for a reduction in the hours of labour to 49½ per week.

*Ipswich.*—A meeting of master builders has been held. It being found that a large number of men would be unfairly dealt with by the resolution passed on the 9th instant, and taking into consideration the misunderstanding apparently existing between the masters and their workmen, it was thought best to submit the matter to arbitration, and that two gentlemen not connected with the trade should be appointed by the masters and two by the men, the mayor being invited to act as umpire. It was further proposed that Mr. T. D'Eye Burroughes and Mr. John Orford, jun., be requested to act on behalf of the masters, and that a deputation be appointed by this meeting to wait upon those gentlemen to solicit their consent.

*Leamington.*—The builders' labourers have struck for an advance of wages from 4d. to 4½d. per hour, equivalent to a rise of 2s. 4d. per week. The labourers had given notice, which had expired, and as the masters had not conceded their demand they refused to work. The principal builders held a meeting, and resolved to grant the required advance, and the labourers have consequently agreed to resume work. The strike stopped the bricklayers and plasterers, and suspended business. Labourers received 18s. 10d., and will now have 1*l.* 0s. 2d.

## CITY CHURCHES.

SIR,—Another City church is in progress of demolition, and in a very short time St. Mildred's, Poultry, will be a thing of the past. The difficulties in the way are said to have been very great. I would they had been insurmountable. Not that I pretend to think the loss great from an artistic point of view, but the Bishop of London has at the present time a Bill before the House of Lords to facilitate the destruction of City churches; and when once the Ecclesiastical Commissioners have tasted blood nothing will stop them. We have already heard from you of the danger that threatens St. Mary Woolnoth, and shall not be surprised to hear that the exquisite campanile of St. Mary-le-Bow is to be removed, for the purpose of widening Cheapside. It is quite evident, from an observation made by the Bishop during the debate on his Bill, that a wholesale clearance will be made if the measure becomes law. His lordship is reported to have said that they must take care not to be in too much of a hurry, lest the price of land should go down in consequence of too many sites being thrown on the market at once. Let no one speak of the "narrow theological training" of our clergy after that. It shows that his lordship has a keen eye to business.

It is said that these churches are of no use, but the authorities of St. Lawrence Jewry have shown that they are of use if services at the right hours of the day are provided. I cannot help thinking that if the interior of Hawksmoor's church, above referred to, were altered, so as to be more in accordance with modern notions, and rendered less heavy than it now is, it might be made as useful as St. Lawrence Jewry.

Perhaps you will permit me to call your readers' attention to that most interesting specimen of Norman architecture in Smithfield. I am alluding, of course, to St. Bartholomew the Great. Perhaps they are not aware that this church is open every day from 11 to 4. I think that I am correct in saying that the restoration has been carried no further since the reopening in 1868, I suppose for lack of funds. I am, however, only speaking from memory, not having visited the church from that time until a few days ago. With the modern rage for "improvements," I should not be in the least surprised to miss the very beautiful archway (the entrance, probably, to the south aisle) which now stands in the line of the houses in Smithfield. It needs but a very little knowledge to see what this church would be if the restoration could be fully carried out. (See the *Church Builder* for 1863, p. 169.)

I am not an architect, but I derive a great deal of pleasure from the few remains which the City possesses. If things go on at the present rate there will scarcely be a house or building left to remind us that London has a history.

R. B. P.

## "A GLAZED SURFACE."

A QUESTION such as we inserted in our last issue generally brings us replies that lead us a little out of our course. However, for once we submit. Messrs. Doulton & Co., of Grove-road, Victoria Park, offer an imperishable white glaze at 5s. 6d. per yard superficial. And Mr. Seacome, of Acrefair, thinks there is no material of the kind for lining walls cheaper than his "Salt-glazed bricks," the same colour as a pipe, on rails at Ruabon for 50s. per 1,000: the rate thence to London being 15s. per ton, or 45s. per 1,000.

## A MONUMENT FOR VIENNA.

OUR advertising columns show that a committee has been formed in Vienna to erect there a monument to the late Vice-Admiral Tegetthoff, and that it is inviting designs from artists of all countries. The competition is to be by models and three premiums; 300*l.*, 200*l.*, and 100*l.*, are offered for the best three designs, irrespective of the arrangement to be made with the author for carrying one of them into execution. Some of our readers may find it worth while to look into the matter.

## THE ARCHITECTURE OF GREAT CITIES.

SIR,—The *Pall Mall Gazette* recently contained an abstract of a letter by "a distinguished ex-architect," addressed to the profession, on the self-evident failure of the materials at present mostly employed in the architecture of cities, and notably London; the various kinds of building-stone, of brick, cements, and terra-cotta, all yielding, sooner or later, either to the dirt-producing or destructive properties of a city atmosphere; paint being at present the only partial and imperfect means resorted to for meeting this and keeping up appearances. The expense of repainting, and the "essential meanness of paint," as Mr. Ruskin has it, from a fine-art point of view, make it less resorted to than occasion might seem to demand, architects preferring even to see their works become begrimed and decayed rather than to have them painted. The "letter" goes on to point out that in *granite* alone have we a stone capable at once of resisting the corrosive properties of a city atmosphere, and of taking a polish which presents a surface against almost all contraction of dirt and discolorisation, or which would be almost self-cleansed by the weather, and completely so at very slight labour and expense. It is further urged that in the employment of the different varieties of coloured granite we have a means of introducing a contrast and richness into our buildings, now very much a desideratum, and that it would give rise to a boldness of design, and simplicity of decorative detail, which would be a useful corrective of the present tendency to a profusion of somewhat bizarre carved decoration, which so quickly suffers, or becomes lost through dirt, weather-stains, and often actual decay. All this is very true and admirable, equally deserving the attention of the sculptor as of the architect, and there cannot be a doubt that much would be gained in all the essentials of durability, cleanliness, colour, and architectural effect, now so adversely affected by atmospheric conditions. Such instances as we have, whether in architecture or sculpture, seem thoroughly to bear out the superiority of granite in all the respects named. It is probable, however, that expense and other conditions would dictate its employment chiefly in *large* works, so that, for the minor purposes of street and domestic architecture, we should be much where we are.

It has, however, long appeared to me that we are possessed of another material peculiarly suited to our climate, capable of the most extensive architectural employment, and which could be brought into use when granite could not. I refer to encaustic tiling (not of course in a highly-glazed form). In this we have a material not only defying the destructive influences of the atmosphere, and sufficiently durable in other respects, but capable of a various treatment as to architectural adornment in design and colour practically endless. Its use would perhaps involve the sacrifice of much on which the architect at present relies for effect in special features and carved decoration; but these would be more than compensated by the deliverance of our architecture from the dismal aspect occasioned by dirt and decay, and by the never-failing light, cleanliness, and variety of pleasing and artistic combinations of colour and design which might be secured, to say nothing of the change from the round of sameness in feature and detail in which we seem content to move. One building skilfully proportioned and designed for express adaptation to the encaustic tiling, with appropriate architectural ornamentation in design and colour, would very much recommend its adoption, and perhaps would even form the precursor of that "new style" whose approach has so long been heralded. It seems to present a wide field to our architects, and to be applicable through every gradation, from simplicity to the utmost richness. And, combined with polished granite for purposes of enrichment and relief by courses of elaborate coloured designs, or plaques in-let, it might be made to produce beautiful and effective results, rivalling Giotto's famous campanile and the coloured marbles of Italy.

In regard to paint, on which for a long time we must more or less rely, it is surprising that so little is attempted to give it more life, by an artistic disposition of different shades.

NEMO.

## ARCHITECTURAL ASSOCIATION.

AT the meeting held on Friday evening, the 17th inst., after the ordinary routine business, the recommendations of the Conference committees were taken into careful consideration, in order to arrive at some distinct conclusions as to the views held on the various subjects by the junior practising members of the profession in London, who belong to, and are represented by, this Association. The discussion was understood not to be open to the public, so we are unable to give a report; except to state that the points of instruction to the delegates to the next conference have not yet been finally drawn out—the subjects coming on again for consideration at the next meeting on the 31st inst.

We have been informed that the excursion to St. Alban's, announced for June 1st, will probably be postponed, at least for a week, as a brigade drill of the Artists' Corps may prevent several members taking part in it. The detailed particulars of the excursion will, however, be announced shortly. It is to be hoped that the late spring-time may have then arrived, and call out a numerous party, to whom the use of their pencils shall not be made painful by chill winds. The central tower of the Abbey Church, now in great part cleared of its old patched and rotten cement coating for a thorough renewal of it (gaining greatly in apparent size, by-the-bye, now the scale is given by the joints of the Roman

tile-work), is, at the present time, to be seen under circumstances necessarily fresh to many. The external scaffolds allow a close approach to almost every portion.

## SYNTACTIC ARCHITECTURE.

EVERYTHING that is young in nature, or new in social economy, must be subject to strict rules to develop it and render it efficient. Young plants must be planted at regular distances, trained or nailed up to artificial supports. Children must be schooled and disciplined with regular hourly occupations, that they may grow up into men and women. Recruits must be drilled and disciplined to make them soldiers. The same principles apply to a new school in architecture, otherwise such a thing will never be developed. It must be syntactic, that is, must have its proper orders and ordinals. There is a fashionable piece of slang amongst architects of the last ten years called "feeling." I do not know what it means, but I suppose it means shutting our eyes and feeling our way in the dark. I am quite certain that it will not lead to what those who use it are so anxious to see: that is, *a new school*.

W. SCARGILL.

## THE BRADFORD WATERWORKS.

THE new "Brayshaw Reservoir," at Horton Bank Top, constructed by Messrs Fogg, for the Bradford Corporation, is now complete. It is situated some 900 ft. above sea level, and is supplied by water from Thornton Moor. It has cost 22,238*l.* 3s. 6d., and will furnish a supply of water to the high-level districts around Bradford. The immense storage reservoir, in course of formation by Messrs. Fogg, adjacent to the North Bierley Workhouse at Clayton, is making steady progress. The huge bank that will hem in the water is being formed into a series of terraces. Up to the close of 1871 the sum of 45,241*l.* had been paid on account of this reservoir. The Oxenhope Tunnel is progressing under Messrs. Pearson's hands. When this tunnel is completed, the supply of water from Thornton Moor will be considerably increased. The works at Barden are progressing. Last year 17,036*l.* 15s. 7d. were expended at Barden; and the total expenditure so far on this costly work, which includes almost entire reconstruction, has been 121,055*l.* 18s. 9d. The Waterworks Committee recommend the Corporation to accept the tender of Messrs. Crabtree, Brothers, and Robert Sugden, of Keighley, for the formation of two compensation reservoirs at Leeming and Leeshaw, Oxenhope, for 49,000*l.*

## THE PROPOSED TRANSPORT OF CLEOPATRA'S NEEDLE TO THE THAMES EMBANKMENT.

IN our volume for 1851, pp. 478, 479, 480, is an elaborate article by the late Mr. Nathaniel Gould, in which he gave various plans whereby Cleopatra's Needle,—a gift by the Pasha of Egypt to this country,—could be removed to London, with estimates and various particulars. The *Times* took up the subject on the 9th of September, 1852, and Mr. Gould again wrote us as to it on 4th December, 1852, at a time when it was proposed to locate it at the Crystal Palace. These proposals, however, came to nothing. The Metropolitan Board of Works has just agreed to provide a site for it, and a renewed endeavour is to be made to have it transported to London, if it be still in a state worth removal, as it was in 1851. As to this there are differences of opinion, as well as in regard to its removal at all, even if worth the trouble. There can be no doubt, however, that it is now going to utter destruction where it lies, and that had the proposal in the *Builder* of 1851 been promptly acted on, and not delayed till now, the relic would have been saved, for Egypt no less than for Britain, which it may be too late now to do.

The subject has been brought up by Major-General Sir James E. Alexander, who thus writes to the Metropolitan Board of Works from the United Service Club:—

"Gentlemen,—I beg leave to bring to your notice a matter of considerable interest, and which has occupied my attention and that of others anxious for the ornamentation of the capital. It is the expediency of transporting to this country, at as moderate cost as possible, the prostrate obelisk of Alexandria. The monolith lying embedded in the sand near the sea-shore was presented by Mahomed Ali Pasha of Egypt to King George IV. and the British nation, but has never been attempted to be removed; and, it is thought, would form a fitting ornament for the noble Thames Embankment. There is a vacant space near the Charing-cross Bridge, where it might advantageously be placed. The prostrate obelisk is 64 ft. in length, about 8 ft. square at the butt, and may weigh about 284 tons. A vessel could easily bring it over, towed, in fine weather, by a steamer. The engineer of the Board of Works, Mr. Bazalgette, C.B., has seen the plan in my possession for lifting and transporting the obelisk: of course, the upright obelisk will not be interfered with; but it was some time ago proposed by a foreigner, as the English did not seem to care for their gift, the prostrate obelisk (on which the hieroglyphics are well preserved), to break it up for building materials.

If the Metropolitan Board of Works would address the Government on the above subject, and ask that the obelisk be brought to England, the site on the Thames Embankment might perhaps be given."

On the motion of Mr. Runtz, it was agreed that Major-General Alexander be respectfully informed that the Board have no funds at their disposal for the conveyance of the obelisk to England; but if it could be brought independently of any cost to the Board, they would be happy to find a site for it.

"An Anglo-Egyptian," in the *Times*, in allusion to this letter, says,—

"In 1852 it was exposed and easily examined. It was found that the angles of the obelisk were much chipped, the hieroglyphics on one square almost entirely obliterated, and it was considered not worth the labour and cost of transport. It has since been covered up by the fortifications.

The only way to remove it would be that adopted by the French in the case of the Luxor Monolith (now in the Place de la Concorde),—viz., by removing part of the wall of the fortifications, and digging a canal deep enough to float a caisson, which must be built round it as it lies, and thus towed during fine weather to England. The east harbour is, unfortunately, shallow, and ships cannot approach within a quarter of a mile of its site, so that the transport and shipment of the Needle on board the vessel constructed with an opening to receive and a platform to carry it (as at the time proposed) would be matter of extreme difficulty.

On the whole, I continue of opinion that it is not worth the trouble in its present state, and I doubt if it is capable of restoration."

## ST. MARY'S, NEWINGTON.

SIR,—In justice to myself, permit me to say that, owing to great pressure of business, I was compelled to postpone the preparing plans for competition till only a few days remained, and that no time was then afforded for more than sketches. These, however, represented a building that could have been honestly built for the money, and the drawings were *correctly*, though roughly, made.

WM. WIGGINTON.

## STONE MERCHANTS AND MASONS.

SIR,—The evil complained of in your last issue by "A Lover of Justice" arises principally from the masons themselves.

Probably quarry proprietors generally have little confidence in London masons, in consequence of non-punctuality in the settlement of small accounts: hence the trade has drifted into the hands of the merchants.

Railway facilities are now such that even small masons could buy direct from the quarries at a very great saving, if they had accounts opened with responsible quarry-owners, and confidence established.

The masons in the Eastern Counties hold their own, and buy direct in truck-loads as cheap as the London merchants do in large quantities.

STEPHEN SEAL.

## A TECHNICAL DICTIONARY.

SIR,—With reference to notes under the above heading, in your columns, may we be permitted to inform your readers that we have in preparation, under the able editorship of Mr. Robert Hunt, of the Museum of Practical Geology, a new and improved edition of the late Mr. Weale's well-known "Technical Dictionary of Terms in Architecture," &c. We hope to have this ready some time during the autumn, and we believe it will be found to supply the want felt by your several correspondents on the subject.

LOCKWOOD & Co.

## THE CHORLEY TOWN-HALL COMPETITION.

SIR,—This competition is another added to the long list of competitive failures, with injustice to the competitors.

My drawings were this week returned, carriage-paid, of course, but without thanks, or other acknowledgment of time and service rendered,—I may now say, wasted.

The commissioners have, however, presented the competitors with Mr. Paley's precious report and award of the prizes, as adopted by one-half of the commissioners who attended the special meeting for that purpose.

Mr. Paley states the sum of 10,000*l.* is quite insufficient for the construction of substantial, well-constructed buildings,—suitable for the town. Considering that the population of the town does not exceed 20,000, and it is neither wealthy nor very thriving, I think this sum is very fair; and the very fact of the instructions stating that the front only must be in stone, the others in brickwork, is sufficient evidence to my mind that they did not wish for the erection of a costly building.

I certainly supposed that Mr. Paley's duty was simply to advise the commissioners in making the awards, according to the strict letter and meaning of the instructions, and that with the question of its cost he could in no way interfere, as that had already been decided by the commissioners, and observed by a great number of the competitors, whose designs were necessarily of a plain and unpretending character.

Mr. Paley assumes that 15,000*l.* is the least sum that would have been required for this purpose, and therefore argues that it is impossible to erect the buildings for the sum named; and then acknowledges that there are plans that had kept within the prescribed sum, but not one of them, with any claim to his consideration, can be carried into execution for the sum named, so that this most important condition as to excessive cost cannot be so used.

I think this argument will scarcely satisfy the competitors, who had a perfect right to expect the award to be made—as it can only be honestly made—according to the strict letter of the instructions, apart from the consideration or opinion of any person upon any design that may have been submitted, with full confidence of the commissioners at least abiding by their own adopted instructions and conditions.

Thus Mr. Paley complacently ignores the question of cost, and says he has carefully kept in view that the award should not be given to the finest architectural design, but to the plan with the best appropriation of the ground, combined with a most suitable elevation (what about the 10,000*l.*?).

If I am rightly informed by the notices of the plans which have appeared in the local papers, the designs which Mr. Paley considers the best appropriation of the ground have shops in the Market-street front, with dwellings, back kitchens, yards, and back passage, through the most valuable portion of the plot, thus leaving an ugly unnecessary gap between the two blocks of building; and this is Mr. Paley's opinion of the utilisation of the best site in the town, which has cost some 7,000*l.* or 8,000*l.* to procure, and is similar to the arrangement suggested by the local surveyor, but which was stated in the instructions should not in any way interfere with or limit the full and free scope of the architect. The premiated designs have, however, failed to improve upon the general features of this most objectionable arrangement; but notwithstanding they have been approved by Mr. Paley, and adopted by the commissioners, who have probably spent as many weeks in examining the drawings as Mr. Paley has hours, and whose previous selection was totally different from Mr. Paley's award; and how they could be brought to approve of designs which were against their more matured judgment, also against the expressed opinion of the public very recently and clearly given at a public meeting, I am at a loss to understand.

The chosen designs stand with their backs to the principal front, Market-street. The public accommodation varies from 700 to 1,500 in the large hall, when 1,000 was the number required in the instructions, and not one of them can be executed for anything like 10,000*l.*, and even supposing Mr. Paley's estimate of 15,000*l.* be correct, as the least estimate, it is more than probable that the cost will exceed 20,000*l.* in execution.

It may afford some satisfaction to the dissatisfied competitors to learn that it is not probable that any one of the premiated designs will be carried into execution, for the above very sufficient reasons.

Mr. Paley's report is an injustice to those competitors who have kept the cost within the stipulated sum, and who, in the exercise of their own judgment, have so utilised the site that they have offices in lieu of backyards, kitchens, and back passages, and which arrangements, I believe, will be more commendable to the common sense of the public of Chorley than any showy elevation, with such interior defects as are said to exist in the premiated designs.

A COMPETITOR.

## "EDWARD PEARCE."

SIR,—Can any of your readers inform me who was Edward Pearce, who published a work on Friezes, "sould by John Overton att ye white horse without Newgate, neare the Fountaine Tavern"? His name is not mentioned in Nagler's "Künstler-Lexicon" nor Phillips's "Dictionary of Biographical Reference." The above work is etched in Cotman's style, and some of the light and shade is much like Rembrandt's school. There is no date to the treatise. Also, I should like to hear what is known of F. de Loriny, architect to James II. of England.

LEWIS SOLOMON.

## STAINING AND VARNISHING.

SIR,—I shall be greatly obliged by your allowing me to ask a question in your valuable paper, and shall be very pleased to see an answer to the same at once.

If an architect put in the specifications for the woodwork to be stained and *twice* varnished, is it a usual thing in the trade always to give it *one* coat of size and *one* coat of varnish, and call it *twice varnished*? And would the architect pass it as *twice varnished* if he knew it had only one coat of varnish?

ONE WHO WANTS TO KNOW.

*** Certainly not, if he did his duty.

## BUILDERS' BENEVOLENT INSTITUTION.

THE thirty-seventh election of pensioners in connexion with this charity, took place at Willis's Rooms, King-street, St. James's, yesterday (Thursday) afternoon, Mr. Joseph Bird, one of the Vice-Presidents of the Institution, in the chair. There were five male and eight female candidates, but the funds at the disposal of the charity only allowed of the election of one male and one female at present.

The names of the candidates were:—Males: Francis Sandon (fifth application), Mark Mintry (fourth application), Matthew Saich (second application), Daniel Thomas, and Richard Bibby. Females: Frances Seare (sixth application), Jane Brothill (sixth application), Elizabeth Trevethan (fourth application), Ann Budd (third application), Eliza Lambert (third application), Arabella Hambrook (second application), Sarah E. Bear (second application), and Ann Williams (second application).

Messrs. Thomas Stirling and Matthew Hall, having been appointed scrutineers, announced the successful candidates to be Mr. Mark Mintry and Mrs. Jane Brothill.

Mr. Walter Watson (Watson, Bros.) proposed, and the Chairman seconded, a vote of thanks to

the scrutineers. The motion having been carried, Mr. Stirling briefly replied.

The proceedings closed by a vote of thanks to the chairman, proposed by Mr. Thomas Smith, and seconded by Mr. Waldram (Hill, Keddell, and Waldram).

The Institution has at present on its funds 42 pensioners,—19 men and 23 women,—the men receiving 24*l.* per annum, and the women 20*l.* The amount of stock standing in the name of the Institution is now 16,131*l.* 17s. 3d.

## "CÆSAR'S CAMP."

I VISITED, recently, at Wimbledon, this relic of the olden time, which is denoted in the Ordnance Map as being placed about a mile to the north-west of the railway station. I walked round the embankment, which has not yet been altered by bricks and mortar. It is engraved in the *Archæological Journal*, vol. xxiii., and the area of the inclosure is stated to be about fourteen acres. Antiquaries seem to differ respecting this relic,—for Mr. W. H. Tregellas believed it to have been a British, Roman, Saxon, or Danish earthwork; Mr. Brayley deemed it to be British, as did Mr. Saull, the Rev. T. Hugo, and Mr. A. J. Kempe, F.S.A. Mr. Gale, Dr. Roots, and Mr. Biden (see "History of Kingston"), believed it to have been a Roman camp; but its circular form is opposed to this idea. According to Mr. Lysons, Wimbaldus was a Saxon name, and this camp resembles the Saxon work at Mount Caburn, near Lewes. It is curious, and deserves inspection. CHR. COOKE.

## BRAMLEY UNION NEW WORKHOUSE.

THE new workhouse for the Bramley Union, comprising the townships of Bramley, Armley, Farnley, Gildersome, and Wortley, has just been completed and opened. Intended to meet the requirements of a district, with some 45,000 inhabitants, the works connected with the new buildings are necessarily upon an extensive scale. Sixteen acres of land constitute the workhouse estate, and situated in the high-lying district of Hill Top, near Armley, the block of buildings form a conspicuous feature in the landscape. The workhouse, which will accommodate some 220 inmates, has been erected, including the purchase of land, construction of approaches, &c., at a cost of 15,500*l.* The opening of the building was celebrated by a dinner in the dining-hall, at which there was a numerous attendance of those interested in the construction of the new building. The accommodation provided in the workhouse is as follows:—Main building—Infirm men, 32; ditto, women, 32; able-bodied men, 10; ditto, women, 10; disorderly, 10; boys, 10; girls, 9; children, 8; married couples, 4; spare bed-rooms, 10; ditto, 9—144. Entrance buildings—Male probationers, 5; ditto, vagrants, 6; female probationers, 5; ditto, vagrants, 6—22. Infirmary—Males, 22; ditto, imbeciles, 6; females, 16; ditto, imbeciles, 6; lying-in ward, 4—54. The outlay on the main building, boundary walls, dining-hall, porter's lodge, board-room, offices, receiving and vagrant wards, and the necessary out-offices, is estimated at 9,275*l.* 10s.; on the infirmary and imbecile wards, &c., 2,755*l.* 10s.; on the entrance-gates, roads, architect's commission, and clerk of the works, 900*l.*; or a total of 15,510*l.*, or about 70*l.* per bed, including the site (2,579*l.*), but exclusive of about 1,300*l.* for furniture and fittings. The buildings generally are of plain design, with the details in the Gothic style of architecture. The workhouse is approached from the Bramley and Wortley road. Near to the entrance-gates has been erected a block of buildings 181 ft. in length, and containing porter's lodge, probationers' wards, vagrant wards, disinfecting apparatus (supplied by Messrs. Nelson, Leeds), offices for the clerk and relieving officers, and the board-room. The main block of the workhouse buildings is two stories in height, with a frontage of 213 ft., and a breadth of 47 ft. The principal entrance is surmounted by a turret or tower for a clock, which rises to a height of about 65 ft. This entrance divides the building into two wings, the left occupied by the males, and the right by the females. On each side of the entrance-hall are the apartments of the master and the matron. From end to end of the principal block runs a central corridor, from which the various wards are readily reached. On the ground-floor are day-rooms and dormitories for the infirm, wards for children, lavatories, and other rooms; and on the first-floor other apartments for the use of the officers and the accommodation of inmates. Opposite the principal entrance and in the rear of the chief block of buildings, is a dining-hall, the size of which is 50 ft. by 30 ft., and the height about 24 ft., the rest of the rooms being 11 ft. in height. It is intended to use this hall also for divine service. Immediately adjoining are a cooking kitchen, larders, and other domestic offices, the kitchen having been fitted up with one of Messrs. Benham & Son's (London), patent cooking-ranges. At the back of the building are paved and spacious yards, where the inmates can take exercise, whilst further to the rear is an infirmary, two stories in height. The architects are Messrs. C. S. & A. J. Nelson, Leeds and Derby. The contractors for the various works have been:—Messrs. Charles Walker & Co., Holbeck, bricklayers and masons; Mr. Jno. Tomlinson, Leeds, joiner; Mr. Jno. Senior, Leeds, plasterer; Mr. Jonas Grant, Wortley, painter; Mr. Edwin Thornton, Shipley, slater; Messrs. Sutcliffe & Wilkinson, Bradford, plumbers and glaziers; Messrs. Heaps & Robinson, Leeds, ironfounders. Mr. John Kershaw, of Bramley, has acted as clerk of the works.

## THE POSITION OF ASSISTANTS.

SIR,—When there is so much talk of the professions of civil engineers, architects, and surveyors having a technical education, I think it should also be considered if the proper inducements are held out to secure that necessity.

For some time past the position of every member of these professions has been getting somewhat paradoxical; and sooner or later it will be the business of some of these big talking societies to untangle the mess, and lay down the law as to what a surveyor, or architect, or civil engineer really is, what is expected of him, and what he is to expect of his employers.

There is a class of men calling themselves civil engineers, architects, surveyors, and auctioneers, who will refuse nothing for money. There are men that will write a specification for a local Board's new broom, or stand up and sell fat cattle, undertake economical funerals, or large drainage works; they forget that any one of these branches, to be efficiently performed, is enough for one man.

Sir, there are carpenters and artizans that now get a little smattering of knowledge, and have never received any sound scientific training, who are literally undermining the market value of the genuine professional man, who has devoted his money and young days to make himself what an engineer ought to be, a natural philosopher. 20s., or 25s. per week is a very common remuneration as assistant for one like myself, who paid his 200 guineas for articles, and sat up night after night to study; and surveyors are actually offered 30*l.* or 40*l.* a year, by local Boards. What sort of professional experience do these Boards hope to get for this amount?

Sir, it appears to me that if a movement is not made by some protection society, or by such society as the Institution of Civil Engineers laying down definite rules as to the position and remuneration of each member, we shall be reduced to common artizans, as we assistants nearly are now. ASSISTANT.

## CHURCH-BUILDING NEWS.

*Dunham Massey.* — The re-decorating the chancel of St. Margaret's Church, with the memorial windows that have been introduced, is now completed. The introduction of the two memorial windows in remembrance of the Rev. John Kingsley, the first incumbent of the church, left a surplus of nearly 60*l.*, and it was resolved that this should form the nucleus of a fund for decorating the chancel. The entire cost has been about 500*l.*, and the additional sum required was readily provided. The work of the windows, as well as that of the decoration of the church, was done by Messrs. Lavers, Barraud, & Westlake, of London and Manchester. The mural paintings consist of a series of angels and archangels, St. Michael, St. Gabriel, &c., at the east end over the east window, carrying legends, whilst those on the side walls are under canopies in the style of the edifice (Perpendicular). Between these, under the clearstory, there is a powdering of stars and fleurs-de-lys, and underneath these a conventional garden, with trees, each carrying a shield with some emblem of our Lord's agony and death, and an enclosure to this garden is formed by a dado of red, diapered with an embroidery pattern such as may be seen in the old decorated screens of Norfolk and Suffolk. The roof is decorated with gold and colour, and the clearstory with a suitable powdered and diapered ornamentation. The work is pointed in a vehicle which is similar in effect to tempera, but said to be more durable. This necessitates some sacrifice of the bloom obtained by tempera work, but the artists considered that in such a humid climate, durability was to be attempted first. The reredos is gilded and picked with colours. The windows of the two lights, north and south of the altar, are also treated in the Perpendicular style of a rather late description. The subjects are placed under canopies of silvery white. The subjects represent, on the north, the annunciation of the incarnation by the angels, the salutation of the Virgin by Elizabeth, the birth of our Lord, and His baptism. On the south, are the Transfiguration, the Crucifixion, Resurrection, and Ascension. In one of the transepts a large window has also been inserted by the same firm. The subjects running through the upper lights is the charge to St. Peter; in the three lower, the angel and the three Marys at the tomb. This window has been inserted at the cost of Mr. Joseph Sidebottom, of the Beeches, Bowdon, as a memorial of his mother.

*Malling.*—The memorial stone of a new chapel, to be built for the benefit of the inmates of the Malling Union, has been laid in the grounds of the workhouse by Lady Caroline Nevill. The chapel will be built in the Early Decorated style, and the material used will be Kentish rag, with dressings of Box stone. Its roof will be open timbered, and covered with tile, and the building will seat 306 persons. The cost of the erection is estimated at a little over 900*l.* Mr. E. W. Stephens, of Maidstone, is the architect; and Mr. W. Church, the builder. The funds for erecting the building had been raised previously to within 100*l.* of the required amount, by voluntary subscriptions.

*Brigg.*—The consecration of Brigg Church has at length taken place. For some weeks it had been closed, and was undergoing considerable alterations and repairs. The old stained-glass windows at the east end have been removed and inserted at the west end of the church, and three new ones substituted in their places. A reredos has been erected over the altar, and is the gift of some members of the congregation. Above this, and on either side of the stained windows just mentioned, appear illuminated scrolls, with the words "It is Christ that died, yea, rather that is risen again, and is now on the right hand of God." These were the work of Miss Susan Paterson, of Brigg.

*Ramsden.* — St. James's Church has been opened for divine worship by the Bishop of Oxford. The church has been entirely rebuilt. Mr. Blomfield is the architect, and Mr. Groves, of Milton, the builder. The edifice consists of a chancel, with nave and south aisle. At the extreme north-west of the nave rise a tower and spire. The tower contains a chime of three bells, and it also forms the porch. There is accommodation for 300. All the adornments in the church are memorials of the late Mrs. Lowbridge Baker, wife of the vicar. The spire and east window are put up by the Rev. R. L. Baker. Relations and friends placed the reredos to her memory. A chancel window, executed by Hardman, of Birmingham, was put in by a brother. The parishioners contributed towards the erection of a small window in the transept, representing a figure of St. Thomas, executed by Messrs. Heaton & Butler, as was also the east window. The pillars of the font, which are of Cornish marble, are the gift of Mr. and Mrs. Borlase.

*Bristol.*—It is proposed, we understand, to close All Saints', Clifton, till about the first week in August, so as to allow of the removal of the temporary building over and around which the permanent stone nave has been built. The interior of the roof will be decorated from designs supplied by Mr. Street, architect of the church, and the whole of the windows, with the exception of two at the west end, will be filled in with stained glass, which is being prepared by Messrs. Hardman, of Birmingham, by whose firm the large east window was supplied. A reredos will also be erected of Caen stone, the subject of which is "The Saviour in glory, surrounded by saints." The gas fittings are by Messrs. Potter & Son, of London; and Messrs. Haden, of Trowbridge, are supplying the heating apparatus. The stone carving is being executed by Mr.

Earp, of London; and the encaustic pavement is to be laid down by Messrs. Godwin, of Lugwardine, who also laid the chancel with tiles.

*Milstead.*—The restoration of the parish church is now shortly to begin. It will be enlarged and re-seated. The gallery will be taken away, and an old Gothic arch opened. The architect is, we understand, Mr. Butterfield.

*Lincoln.*—The new church of St. Martin has now advanced far towards completion. The tower is finished, and the steeple begun. The height from the tower to the top of the vane will be 80 ft., and the tower 76 ft., making the whole height 156 ft. This, with the position the church occupies, will make it a prominent object for miles. The interior is now nearly complete.

*Dorking.*—At a meeting of the committee it has been decided, in consequence of certain alterations in the architect's plans, that the builders who originally tendered for the work be invited to send in fresh tenders upon the reduced specifications. It is contemplated in the first instance to build the nave and transepts only, leaving the tower and spire to be completed at an after period, as funds accrue. The committee afterwards met for the purpose of opening the new tenders received for the construction of part of the proposed work, viz., the removal of the present tower, the rebuilding of the choir, nave, and north transept, the addition of a south transept, and the laying the foundation of the new tower at the west end. There were in all seven tenders received, which may be classified as follows:—Messrs. Colls & Sons, Dorking, 8,367*l.*; Mr. Putney, Dorking, 7,514*l.*; Messrs. Gibson, Brothers, Southall, 6,391*l.*; Messrs. Wright, Brothers, & Goodchild, Croydon, 6,350*l.*; Mr. Shearburn, Dorking, 6,275*l.*; Mr. James Harris, Woking, 6,145*l.*; Messrs. Goddard & Sons, Farnham, 5,491*l.* The last tender being the lowest was therefore accepted, subject to the condition that the work be not commenced until the whole, or the greater part of the sum required for same be subscribed, and that the subscriptions already promised (amounting to about 4,050*l.*) be allowed by the donors to be appropriated forthwith to the completion of that portion of the work referred to. In accordance with this resolution, the vicar and churchwardens have issued a letter to the subscribers inviting their adhesion to the plan proposed. It is to be hoped the committee will be enabled to proceed continuously with the work to the completion of the tower and porch, for which, with the architect's commission, an additional sum of not less than 4,000*l.* will be required.

## Books Received.

*A Treatise on the Theory of Friction.* By JOHN H. JELLETT, B.D., President of the Royal Irish Academy. Macmillan & Co. 1872.

THE theory of friction, considered as a part of rational mechanics, has hardly received the attention which it deserves. Even in the most complete systematic treatises, the space accorded to its discussion is small compared with that bestowed upon questions in which the hypothesis of perfect smoothness has been assumed as the basis of investigation; and no doubt many students have been led to regard the discussion of this force less as a part of rational mechanics than as a correction to be applied before the investigations of that science can be made practically useful. It is under such considerations, and because the force with which this work is connected is subject to definite laws, as susceptible of mathematical expression as the force of gravity, that the author has made a distinct and separate treatise of it. The theory and plan of the work are stated in a preface.

### VARIORUM.

"Statistics of all the Countries in the World." A compendious and valuable sheet table, containing numerous particulars as to area, form of Government, head of state, population, expenditure, debt, paper money, notes in circulation, standing army, navy, merchant vessels, imports, exports, chief products, money, weights and measures, railways, capitals and chief towns; compiled by Dr. Otto Hubner, director of the Prussian central statistical archives, has been prepared in the form of an English edition, with the sanction and co-operation of Dr. Hubner, by Mr. H. Sutherland Edwards, and published by by Stanford, of Charing Cross.——"Criminal Returns: Metropolitan Police, 1871." The usual returns of the number of persons taken into custody by the Metropolitan Police, and the results, in the year 1871; with comparative statements from the year 1832 to 1871 inclusive, have been issued in a printed form. Among the numerous tables is one showing the degree of instruction as well as the numbers of those convicted, the sex, &c., and, according to which, of 71,961 taken into custody, 48,306 were males, and 23,655 females; 8,741 males and 5,197 females could neither read nor write; 37,271 males and 18,329 females could read only, or read and write imperfectly; 2,225 males and 129 females could read and write well; and 69 males and no female had superior instruction. Of the whole 45,608 were summarily disposed of or held to bail, and 2,655 were tried and convicted, among whom were 1 female and 5 males with superior instruction.

## Miscellanea.

**American Plumbers.**—A correspondent in the *Industrial Monthly* writes,—"The supply water-pipe which extends from the street, along the top of our cellar, to the sink in the kitchen, had a very small hole in one side, so that a stream of water spun out, not so large as a cambric needle. If I had known that the difficulty could have been remedied by placing the square end of a tenpenny nail on the hole, and hitting it two or three light blows with a hammer, the knowledge would have saved me much trouble and expense; but I did not know that a small hole in a lead pipe can be stopped by battering the metal just enough to close the orifice, therefore I went and called a plumber. Of course, he was employed by the day. He knew how to stop the issue in less than one minute; but he preferred to make a good job for himself and for his employer. He was too proud to be seen carrying his solder and tools along the street, hence a helper must be detailed to carry these appliances. His employer paid him 20 cents per hour, but charged 60 cents per hour for his services. He paid the helper 10 cents per hour, and charged 40 cents, whether they were loitering along the streets or at work. They looked around, lighted their pipes, smoked and chatted, and used about 4 ounces of solder, for which the charge was 50 cents, and they reported they had used one pound. The plumber reported one hour each for himself and helper. Thus the cost of stopping one pin-hole cost me 1 dol. 50 cents, when any one who can handle a hammer could have closed the issue in half a minute if he had thought of how to do it."

**Opening of a New Police and Fire Station in Manchester.**—The new B Division police and fire station in Goulden-street, Rochdale-road, has been opened. The buildings cover an area of 1,480 square yards, and are bounded by Goulden-street, Chadderton-street, Bannett-street, and Cross-street. The police offices, which face Goulden-street, are 105 ft. long by 80 ft. broad. The portion occupied by the cells and the parade-room is only one story high. The superintendent's room, charge-room, and sergeants' room are likewise on the ground floor, but immediately over these the building rises to the height of four stories. In the upper stories accommodation is provided for six firemen and their families. The parade-room measures 61 ft. by 39 ft., and is lofty. The number of cells is nineteen. A ventilating shaft, 90 ft. high, and measuring 14 ft. by 8 ft., surmounts the buildings. The fire station is at the angle formed by Goulden-street and Cross-street. The building measures 60 ft. by 20 ft., and is three stories high. On the ground floor are the firemen's room and inquiry office, with bath-room and store-room at the back. The total cost of the buildings amounts to 10,775*l.* The plans were prepared by Mr. J. G. Lynde, the city surveyor; and the contractors were Messrs. R. Neill & Sons.

**Good News for Iron Masters.**—The *Boston* (Massachusetts) *Globe* sounds a note of alarm at the threatening iron famine. It is stated that 2,600,000 tons were used in the United States last year, of which 2,000,000 were produced, and the remainder imported. A careful estimate of the increased consumption during the present year, and of the probable supply, demonstrates that there is too much reason to expect a very large deficit in supply. Prices of American and imported iron have advanced fully one-third within the last three months.

**The Burning of the Theatre Royal, Melbourne.**—By the Australian mail details have arrived of the burning of the Theatre Royal, Melbourne, on the 19th of March, as intimated in the *Builder* of the 27th of April. The Royal was the premier theatre of the Australian colonies. On the eve of its destruction "The Streets of New York" had been performed; and shortly before twelve the vicinity of the dressing-rooms was found to be on fire. Alarm was instantly given, and help soon at hand; and at first there seemed a chance of saving the building, but the scenes caught the conflagration, and the whole edifice was soon in flames. The *Melbourne Argus* says:—"The destruction of three large Australian theatres,—the Haymarket in Melbourne, the Prince of Wales's Opera House in Sydney, and now the Theatre Royal, in the brief space of eighteen months, seems a remarkable coincidence. The three events coming so quickly after each other have been a severe blow to the profession, and it is hoped that these disasters will lead to the introduction of an improved style of building for such places of entertainment. The Princess's is now the only theatre remaining in Melbourne, but it cannot be doubted that ere long a temple of the drama worthy the leading city of the Australian group will rise in our midst to replace the leading theatre which now lies in ashes."

**Restoration of Merton College Hall, Oxford.**—The Hall of Merton College is undergoing a restoration at a cost of upwards of 4,000*l.* Mr. Scott, architect, has been engaged to restore the building, and the whole of the work that Mr. Wyatt executed in 1790 has been cleared away. The design now prepared by Mr. Scott is in accordance with the original construction of the Hall, which is of fourteenth-century date. A new open-timber oak roof will be substituted for the present one, and the music-gallery and screens will be replaced at the west end, whilst at the east end there will be canopied seats raised upon a dais. The windows will be completely restored from the fragments which have been discovered of the original designs, and they will have seats in them the thickness of the wall. Mr. Scott has also designed new furniture, tables, and benches, to suit the period. The whole of the exterior of the hall will be renovated, and the sham buttresses have all been taken down, and new ones have taken their place. The Headington ashlar will be removed, and the walls will be refaced with Taynton stone. The porch will have new archways, with new steps and wing walls. The whole of the work is to be completed by the commencement of next Michaelmas Term. Mr. Booth, of London, is the contractor, and Mr. Lee is the clerk of the works.

**Charge of Perjury against a Building Inspector.**—At the Salford Town-hall, before Sir John Iles Mantell, Mr. Francis Drake, building inspector in the service of the Salford Corporation, was summoned at the instance of Mr. Joseph Blomiley, joiner and builder, carrying on business in Broughton, upon the charge of having committed wilful and corrupt perjury on the 2nd of May. It seems that Mr. Blomiley had been summoned on that date for a breach of the building regulations, and upon the evidence of Mr. Drake (the present defendant), was fined 50s. and costs. The prosecutor had recently erected some property in Broughton, and on his part it was sought to be shown that the defendant had made a false statement with respect to the length and dimensions of floor joists, in consequence of which he had incurred penalties for the represented infraction of the law. While the case was proceeding it was suddenly brought to an abrupt and unexpected termination by the inability of the clerk of court or any one to give evidence that Mr. Drake was sworn in the particular case at issue.

**National Music Meetings at the Crystal Palace.**—It seems that the arrangements for these performances are now complete. The private preliminary hearings by the jury of each class of sopranos and tenors will take place on Wednesday, June 26. The contraltos and baritones will be heard privately on Friday, June 28. At these hearings (which are to be held in the concert-room of the Palace), those who are to compete in public will be chosen by the different juries. The public competitions will commence on Thursday, June 27. At two o'clock on that day the soprano singers will sing against each other, and after them the tenors will compete. At five o'clock a grand vocal and instrumental concert will be given, the programme of which will include the competitors.

**London and Middlesex Archæological Society.**—A general meeting of this Society has been held in the newly-restored Chapter-house, at Westminster; the dean, in the absence of Lord Talbot de Malahide, presiding. Stained glass, he said, was absolutely necessary, both to make the building usable in bright summer weather, and to restore to it that solemn effect which in the Middle Ages it must have worn. A paper on the Iconography of the Chapter-house, was read by Mr. J. G. Waller. A short paper was read by Mr. White, for Mr. John Franklin, who contended that we had an indigenous school of art distinct from that of Italy. Mr. Franklin promised a more elaborate paper on the subject. A paper was read by Mr. Joseph Burtt, on the Records and Muniments of the Abbey, which, he said, were so numerous and complete that there was scarcely a square foot of Mediæval Westminster that might not be illustrated from them. In the course of the afternoon the visitors were conducted over the Abbey, and interesting explanations were given by Mr. Scott, the architect of the Dean and Chapter. Amongst other less well-known points which were visited, was the recently-discovered site of St. Catherine's Chapel.

**National Safe Deposit Company.**—A site, it is said, having been secured in or about Mansion House-street, a large building is to be erected, which shall be both burglar-proof and fire-proof. The building is to be ostensibly of iron, but something on the model of an armour-plated vessel. The walls will consist of a number of plates, varying in thickness from ½ in. to ¾ in. These plates will be successively of hard and soft metal (iron and steel), so as to render all attempts of the burglar futile, and between each of the screw plates there is to be a packing of gneister, of which latter material the higher walls of the building are to be mainly constructed. The packing between the armour plates will not only arrest the burglar but disarm the electric force in a thunder-storm should it strike the building. There are long corridors of safes right and left, each marked and numbered. The simple act of withdrawing the key from the lock is described as locking each safe securely.

**New Town-Hall, West Vale, Yorkshire.**—The plans for the proposed public building at West Vale have been prepared by Messrs. Horsfall, Wardle, & Patchett, of Halifax. The principal front is to the Elland and Saddleworth-road, and will be in two stories. The entrance is placed beneath a tower 60 ft. in height, having on one side a shop and dwelling-house, and on the other the public buildings. On the ground-floor are six rooms to serve as local board-room, lecture-room, library, and class-rooms for the Mechanics' Institute. A staircase, 5 ft. wide, leads to the large room, which will be 63 ft. long by 38 ft. wide, and 22 ft. high. At one end is to be a raised platform. The three-light window at one side of the hall opens out on to a balcony for out-door addresses. The basement story contains store-rooms, heating apparatus, and a fire-engine house, having large doors opening out directly to the road.

**New Pulpit, Holy Trinity Church, Chester.**—A new pulpit has been put up in Holy Trinity Church, Chester. It was designed by the architects, Messrs. Kelly & Edwards, and executed by Mr. Thomas Earp, of London. The pulpit, or rather open platform, is the gift of a daughter of the late Dean Anson. It consists of polished alabaster, the front being divided into three panels of open trefoil work, with quatrefoils in the centres. The panels are divided by green marble shafts, the capitals being part of, but standing out in bold relief from, the alabaster cornice. In the middle panel the quatrefoil encloses a floriated cross of red marble and the corresponding quatrefoils in the other panels, the sacred monograms "I.H.S." and "X.P." Above the base-moulding is a band of inlays of coloured marble, and the emblems of the Evangelists are introduced in the mouldings, while the whole of the work is enriched by jewels of fluor spar.

**A Pretty Portrait.**—Messrs. Marion & Co. have published a charming photograph, by Messrs. Robinson & Cherrill, from a medallion-portrait of Mrs. Scott Siddons, by Mr. A. Bruce Joy. The accomplished original is at this time acting, with great spirit and ability, at the Queen's Theatre, in a clever, but curious piece, called "Ordeal by Touch."

**Mountain Railways in Yorkshire.**—An experiment is to be made on the abandoned incline of the Whitby and Malton Railway, in Goathland. The road has been re-laid to a gauge of 3 ft. and $7\frac{5}{16}$ in., with a central rail laid 9 in. above the others, and edgewise. The object of the alterations is the testing of the first of a series of mountain-climbing locomotives built by Messrs. Manning, Wardle, & Co., of the Boyne Engine Works, Leeds. These engines are intended for a continuation of an existing railway in Brazil, and are projected to climb the mountains to the table-land of Rio de Janeiro, where the coffee is produced, and which produce is now only got to the seaboard on the backs of mules. The engine is limited to twenty-five tons, but contains two distinct actions, that of the ordinary locomotive, and a novel one having a direct action, by which four wheels worked horizontally can be put in use, grasping the edges of a horizontal rail at a pressure of forty tons when ascending an incline. By this means it is confidently expected that a load of forty tons can be worked up a gradient of 1 in 12.

**Paper Car-wheels.** — The *National Car Builder* describes railway car-wheels of paper. The material, it says, is straw-board, in all respects the same as that used in the manufacture of paper boxes, and may be made of wheat, rye, or oat straw:—"The wheels constructed of it possess some very requisite and desirable qualities,—a perfect form, considerable elasticity, great strength and durability, and a facility of repair which is entirely wanting in a chilled wheel. These points, together with the method of construction and the peculiar nature of the material, make these wheels worthy of attention." The tyre, however, is of steel, and covering the whole of each side of the wheel are two side-plates of Norway iron boiler-plate, which fit against a shoulder turned in the tyre. The paper framework is said to give elasticity to the cars in motion, and "deadens the jar." Trains have been run at the rate of thirty miles an hour with these wheels, which are said to be very strong and lasting.

**The Patent Laws.**—The Select Committee on the Patent Laws have agreed to a series of resolutions which they recommend as the basis of legislation on the subject. They do not suggest the granting of pecuniary rewards as a substitute for the temporary privilege conferred by letters patent, but they point out some instances in which the existing laws are defective and require improvement.——At a recent meeting of the Labour Representation League, Mr. R. M. Latham, the president, in the chair, the report just issued by the Select Parliamentary Committee on the Patent Laws was discussed. Much dissatisfaction was expressed with the report, and at the fact that members of the working classes had not been called to give evidence before the Committee, the constitution of which body was objected to on the ground that its composition consisted of two-thirds of manufacturers and parties representing interests antagonistic to those of inventors. It was also urged that a fair and complete inquiry into so important a subject as the Patent Laws could only be satisfactorily effected by a Royal Commission representing all the interests in the community; and steps were ordered to be taken with a view of insuring an exhaustive inquiry into the whole subject by that means.

**Portable Railway for Common Roads.**—Mr. Wm. Pidding, of Bedford-square, has, it is said, invented a system of portable rails, which secures to every carriage its own tramway, and which may be used with equal facility upon any ordinary road, whether macadamised, paved, or asphalted. The carriage wheels, which are only about 21 in. diameter, run upon the inside of the tyres of a second pair of wheels, of sufficient size to permit the small wheels to rotate below, between the tyres and the naves of the large ones. This larger tyre, which forms the portable railway, is made up of a series of long and short segments, each carefully shod with india-rubber, or which may be constructed of steel, formed into a band chain, one or another portion of which is, of course, always in a position ready to receive the running wheel. The idea is not new, but this may be an improvement on the attempts made some years since to effect the object in view.

**Monument to Mazzini.**—The inhabitants of Syracuse are building a monument of white marble to Mazzini in the famous quarries in which 7,000 Athenians were confined after the siege of Syracuse by Nicias.

**Wells and Sewers.**—Last week a number of men employed in making a common sewer in Orr-street, Calton, Glasgow, came upon an old pump well which had been discontinued on the introduction of Loch Katrine water into the city, and since covered up. One of the labourers, Patrick Reid, went down the well to discover its depth, and after some time disappeared. Another labourer, becoming alarmed at his continued absence, went to his assistance, but he also did not return. Ultimately, a third man followed, and with a similar result. After a considerable time had elapsed, and none of the other men venturing to descend the well, grappling irons were procured, and by their aid the three men were brought to the surface insensible, and were with difficulty recovered. They stated that on descending they lost consciousness from the effects of foul gases. The incident is instructive.

**The Artists' General Benevolent Institution.**—The dinner at Willis's Rooms, St. James's, in aid of this very excellent and important charity, passed off with considerable *éclat*. The Marquis of Lorne presided with much geniality, and made a very sensible address. Mention was properly made of the liberal aid which has been given to the Institution by Mr. John Heugh, who replied in a feeling and manly speech. The treasurer, Mr. P. C. Hardwick (to whom, in conjunction with Mr. Millais, hon. sec., the Institution is much indebted), announced that the subscriptions amounted in all to 2,552*l.*, including a donation of 500*l.* from a friend in the room whose name was not mentioned. The dinner was provided by Mr. Willis in excellent style, and formed a striking contrast with that furnished by the proprietors of St. James's Hall on a recent similar occasion.

**St. John's, Hull.**—The *Hull Packet*, in an able article on church restoration in that town, says it is contemplated to entirely remodel the interior of St. John's parish church, in accordance with designs prepared by Mr. Christopher Wray. The present cumbrous galleries are to be removed; the high-backed pews will be substituted by open benches of modern pattern, the ceiling raised, and the body of the church divided from the aisles by a colonnade of seven bays. The work, which is estimated to cost about 5,000*l.*, will, when completed, effect quite a transformation of the interior, which is now of the heaviest primitive style. The incumbent, the Rev. H. W. Kemp, is heartily supported by his parishioners, and trusts soon to bring the restoration to a speedy and satisfactory completion.

**Proposed New Examination Schools, Oxford.**—The delegates appointed by decree to inquire as to the advisability of building new schools on the Angel site, or of using that site for any other purpose, have agreed to the following, along with other resolutions, which are reported to Convocation:—That the only method by which the requisite accommodation, regard being had not only to the existing circumstances of the University, but also to the future, can be provided, is by erecting new schools on a separate site specially appropriated to the object. That the Angel site, though not so central as might be wished, is the only sufficient site which can be procured. That it is desirable to proceed at once to the building of the new schools on that site.

**Proposed New Church at Crowthorne.**—On Saturday afternoon last, a meeting was held in the School of Art, Wellington College, to consider the propriety of building a new church to supersede the present temporary structure at Crowthorne. Plans of the new church were exhibited and examined, and it transpired that the cost of the church will be 3,000*l.*, and that the architect selected for the work is Mr. Arthur W. Blomfield. Mr. John Walter, M.P., presided, and was supported by Dr. Benson, Head Master of Wellington College. Appropriate resolutions, promotive of the object in view, were unanimously passed, including the appointment of a committee.

**The Sewage Works, Doncaster.** — The foundation-stone of the irrigation works at the Holmes has been laid by the Mayor. His worship, after laying the corner-stone, jokingly remarked that finding that masons were continually reducing the hours of labour and increasing the amount of pay, and understanding that in a short time the masters were to do the work and the men receive the money, he thought the best thing that he could do was to join the society.

**The "Anti-Mildew" Grain and Seed Protector.**—The heating of corn in ships and warehouses, and of stacks of corn and hay, is a great evil; and to remedy this a simple invention, by a Greek agricultural engineer, I. Methodios Ioannides, late Greek Consul in Wallachia, has been patented in this country as well as abroad. It mainly consists of a cylindrical ventilator, with perforated branches which ramify through the holds, granaries, or stacks where the contents are liable to heat, and become mildewed.

**Ice Machines.**—The machines for manufacturing ice, either in small quantities for families, or on a great scale, by means of heat, with ammonia and chloride of calcium, seem to be ingenious and useful. They were patented in the United States by Messrs. Vaass & Littman last year, and are now sold in London by Messrs. Sladden, Brothers, & Co. One pound of coal is said to produce three pounds of ice.

**Civil and Mechanical Engineers' Society.**—At a meeting held in the Rooms of this Society, Westminster-chambers, on Friday, the 17th inst. (the president, Mr. Arthur C. Pain, C.E., in the chair), a paper upon "Water-supply to Towns and Villages" (Part II.) was read by Mr. George W. Usill, F.M.S., Assoc. Inst.C.E., after which a vote of thanks having been awarded the author, a lengthy discussion took place.

**Royal Architectural Museum.**—A valuable addition has been made recently to the Museum by the gift of Mr. Charles Hudson of the large and fine collection of casts formed by his brother, the late Mr. Octavius Hudson, from the cathedrals of Salisbury, Chester, Lichfield and Hereford, and from other places visited by that gentleman.

**The Surrey Theatre, Blackfriars-road.**—Last week this property was put up for sale by auction, but no bid was made for it. The reserve price was understood to be 25,000*l.*,—10,000*l.* less, if we are rightly informed, than it cost. The history of the rebuilding and the circumstances that grew out of it would be curious.

**The New Dock, Berwick.**—The Berwick Harbour Bill having received the royal assent on Monday night, it is expected that the work of making the new dock will be proceeded with almost immediately. Messrs. Stevenson, C.E., Edinburgh, are engaged in the preparation of the working plans.

**New Act on County Buildings.**—By an Act just printed county authorities may now borrow money for the purpose of building shire-halls, &c., and also judges' lodgings, for thirty years, instead of fourteen years, as previously provided.

**Society for the Encouragement of the Fine Arts.**—On Thursday, the 30th, a lecture will be given at Conduit-street, by Mr. G. Browning, on "The Poetry of Germany." Sir Digby Wyatt will preside.

**Utilisation of Blast-Furnace Slag.**—Mr. C. F. Claus, of Middlesbrough-on-Tees, proposes to treat blast-furnace slag so as to produce masses thereof of a cellular structure suitable for building purposes.

**A Bright Idea.**—A correspondent from one of the London districts tells us that the gas is so bad there that the inhabitants in some of the streets do not think it worth while to light it at all!

## TENDERS

For a villa at Staplegrove, near Taunton. Mr. J. Houghton Spencer, architect:—

| | |
|---|---|
| F. Fox | £1,452 16 0 |
| C. Fox | 1,431 0 0 |
| Macey & Yandell | 1,400 0 0 |
| Dinham | 1,390 0 0 |
| Rendell | 1,347 0 0 |
| Woolfrey & Hartnell | 1,325 0 0 |
| Moss & Giles | 1,320 0 0 |
| Shewbrooks | 1,285 0 0 |

For a school-house in Tangier, Taunton. Mr. J. Houghton Spencer, architect:—

| | |
|---|---|
| Shewbrooks | £545 0 0 |
| Mans & Giles | 485 0 0 |
| Manning | 466 0 0 |
| Dinham | 390 0 0 |
| C. Fox | 386 0 0 |
| Hawkins | 380 0 0 |
| Macey & Yandell | 375 0 0 |
| Woolfrey & Hartnell | 356 0 0 |

For lodge at Corfe, Somerset. Mr. J. Houghton Spencer, architect:—

| | |
|---|---|
| Davis | £378 0 0 |
| Pollard (accepted) | 342 0 0 |

For carpenter's work (labour only) for a farm-house at Sherford, near Taunton. Mr. J. Houghton Spencer, architect:—

| | |
|---|---|
| Hartnell | £120 0 0 |
| Cosens (accepted) | 115 10 0 |

Accepted for new bank at Blackburn, for Messrs. Brooks & Co. Mr. George Truefitt, architect:—

| | |
|---|---|
| Patteson (mason) | £6,096 0 0 |
| Ward (plumber) | 615 0 0 |
| Jepson & Isherwood (plasterers) | 223 0 0 |
| Ashcroft (slater) | 3 0 0 |
| Calvert (bricklayer) | 721 10 0 |
| Duckworth (joiner) | 1,393 0 0 |
| " (ironmonger) | 1,011 0 0 |

For alterations and additions to the Holy Trinity parsonage, Blackheath hill. Mr. Alfred Williams, architect. Quantities supplied by Messrs. Landsdown & Pollard:—

| | |
|---|---|
| Scrivener & White | £1,680 0 0 |
| Stimpson & Co. | 1,663 0 0 |
| Longmire & Burge | 1,637 0 0 |
| Penny | 1,617 0 0 |
| Jerrard | 1,384 0 0 |

For a rectory at Worthing, for the Rev. W. S. Lewis. Mr. George Truefitt, architect:—

| | |
|---|---|
| Smith (accepted) | £1,285 15 0 |

For the re-erection of the Albion Inn, St. Peter's, Thanet, for Mr. Cramp. Mr. John R. Collett, architect:—

| | |
|---|---|
| Barwick | £874 0 0 |
| Smith & Son | 796 0 0 |
| Osborn | 795 0 0 |
| Elgar | 695 0 0 |
| Harrison (accepted) | 685 0 0 |
| Bugden | 650 0 0 |

For works to mansion, No. 135, Piccadilly. Mr. Alexander Peebles, architect. Quantities supplied:—

| | |
|---|---|
| Fish | £5,800 0 0 |
| Ennor | 5,340 0 0 |
| Eaton & Chapman | 5,227 0 0 |
| Bywaters | 4,980 0 0 |
| Howard & Sons | 4,899 0 0 |
| Benstead & Sons | 4,896 0 0 |

For erecting temporary premises in Burnes-place, Chapel-street, Edgware-road, for Mr. D. B. Johnstone. Messrs. Bird & Walters, architects:—

| | Tender No. 1. | Tender No. 2. |
|---|---|---|
| Newman & Mann | £496 0 0 | £418 0 0 |
| Henshaw | 467 0 0 | 406 0 0 |
| Ebbs & Son | 467 0 0 | 365 0 0 |
| Williams & Son | 464 0 0 | 432 0 0 |
| M'Lachlan | 431 0 0 | 399 0 0 |
| Nightingale | 429 0 0 | 414 0 0 |
| Brown | 412 0 0 | 387 0 0 |

For alterations and additions to Albion Tavern, Pimlico. Messrs. Bird & Walters, architects:—

| | |
|---|---|
| Frown | £490 0 0 |
| Henshaw | 478 0 0 |
| Williams & Son | 463 0 0 |
| Nightingale | 440 0 0 |
| Newman & Mann | 305 0 0 |
| Cuttler | 303 0 0 |
| Ebbs & Son | 292 0 0 |

For rebuilding shops, corner of Walbrook and Cannon-street, City. Mr. Wm. Thompson, architect:—

| | |
|---|---|
| Bridgeman & Co. | £6,277 0 0 |
| Henshaw & Co. | 5,950 0 0 |
| Kelly, Bros. | 5,632 0 0 |
| Gammon & Son | 5,602 0 0 |
| Nightingale | 5,599 0 0 |
| Scrivener & White | 5,537 0 0 |
| Perry, Bros. | 5,337 0 0 |
| Conder | 5,275 0 0 |
| Newmann & Mann | 5,258 0 0 |
| Sheppard | 5,200 0 0 |

Alterations and repairs to Windsor Castle Public-house, Victoria Park, Bishop's-road. Messrs. Bird & Walters, architects:—

| | |
|---|---|
| Boxall | £486 0 0 |
| Nightingale | 450 0 0 |
| Henshaw | 403 0 0 |
| Williams & Son | 397 0 0 |
| Newman & Mann | 381 0 0 |
| M'Lachlan | 314 0 0 |

For the erection of stables, Maida-vale, for Mr. E. Jonas. Mr. H. M. Burton, architect.

| | |
|---|---|
| Brown & Robinson | £657 0 0 |
| Nightingale | 599 0 0 |
| Cross & Son | 560 0 0 |
| Timewell | 546 0 0 |
| Mitchel | 545 0 0 |

For erecting a synagogue at Margate. Mr. Ernest Turner, architect. Quantities supplied by Mr. Thomas Dixon:—

| | |
|---|---|
| Cullum | £4,865 0 0 |
| Shurman | 4,840 0 0 |
| Stimpson & Co. | 4,771 0 0 |
| Higgs | 4,740 0 0 |
| Cunningham | 4,610 0 0 |

For cottage residences at Long Ditton, Surrey. Mr. John Giles, architect. Quantities by Mr. C. H. Goode:—

| | |
|---|---|
| Rankin | £1,000 0 0 |
| Cuttell & Co. | 967 0 0 |
| Hebb | 950 0 0 |
| Jocelyn | 935 0 0 |

For back portion of business premises, Market-place Reading, for Messrs. Sutton & Sons. Messrs. Wm. & J. T. Brown, architects. Quantities supplied:—

| | |
|---|---|
| Matthews | £2,299 0 0 |
| Strong & Son | 2,240 0 0 |
| Sheppard | 2,219 0 0 |
| Barnicoat | 2,200 0 0 |
| Aitchison & Walker (accepted) | 2,175 0 0 |

For the erection of County of Gloucester Bank at New Swindon, Wilts. Mr. W. H. Read, architect:—

| | |
|---|---|
| Wiltshire (accepted) | £1,046 18 0 |

For a new chapel at the Brentford Union Workhouse, at Isleworth. Mr. Holmes, architect. Quantities supplied by Mr. Shrubsole:—

| | |
|---|---|
| Gardiner | £674 0 0 |
| Hiscock & Son | 655 0 0 |
| Pierce | 590 0 0 |
| Dodge | 577 0 0 |
| Brunsden | 527 0 0 |
| Nias | 519 0 0 |

For alterations and repairs to the Somerset Arms, Fulham-road, for Mrs. Plumb, exclusive of pewtering and gasfitting. Mr. W. H. Lamborn, architect:—

| | |
|---|---|
| Marr | £357 0 0 |
| Batchelder | 347 0 0 |
| Bigwood (accepted) | 320 0 0 |

For the erection of a pair of semi-detached houses at Bromley, Kent, for Mr. Lucas. Mr. W. Barrett, architect. Quantities not supplied:—

| | |
|---|---|
| Taylor | £2,627 0 0 |
| Chesent | 2,529 0 0 |
| Elsden | 2,349 0 0 |
| Penny (accepted) | 2,345 0 0 |

For building the Ship Inn, Tottenham, for Mr. N. Filsell. Mr. T. J. Hill, architect:—

| | |
|---|---|
| Sabey & Sons | £2,096 0 0 |
| Rest & Brown | 1,987 0 0 |
| Linzell | 1,775 0 0 |
| Childs | 1,695 0 0 |
| Chapman | 1,450 0 0 |

For houses and shops, as recently advertised. Mr. A. Latham, architect. Quantities supplied:—

| | |
|---|---|
| Dales | £5,385 0 0 |
| Peskett & Taylor | 4,980 0 0 |
| Pollard | 4,800 0 0 |
| Wheeler | 4,737 0 0 |
| Cox | 4,560 0 0 |
| Coles | 4,500 0 0 |
| Williams | 4,478 0 0 |
| Wright, Bros., & Goodchild | 4,395 0 0 |
| Walkey | 4,300 0 0 |
| Johnson | 4,293 0 0 |
| Hollidge (accepted) | 4,150 0 0 |
| Dover | 3,999 0 0 |

For the erection of Congregational Chapel in the village of Pyecombe, Sussex. Messrs. Goulty & Gibbins, architects:—

| | |
|---|---|
| Hollands | £316 0 0 |
| Patching & Son | 290 0 0 |
| Howard | 279 0 0 |
| Hindess (accepted) | 265 0 0 |

For the erection of the Julius Elliott Memorial Schools, in Mount-street, Brighton. Messrs. Goulty & Gibbins, architects:—

| | | Credit Old Materials. |
|---|---|---|
| Nash & Co. | £2,280 0 0 | — |
| Cheesman & Co. | 2,040 0 0 | £20 0 0 |
| Patching & Son | 1,937 0 0 | 15 0 0 |
| Lynn & Sons | 1,890 0 0 | 15 0 0 |
| Hollands | 1,872 0 0 | 15 0 0 |
| Lockyer | 1,855 0 0 | 25 0 0 |
| Baker (accepted) | 1,812 0 0 | 10 0 0 |

For Catholic schools and presbytery, Aldershott. Mr. Pownall, architect:—

| | |
|---|---|
| Jones & Johns | £1,201 0 0 |
| Hughes | 1,185 0 0 |
| Garland | 1,161 0 0 |
| Sharpington & Cole | 1,140 0 0 |
| Martin, Wells, & Co. | 1,117 0 0 |
| Slade | 1,096 0 0 |

*Refreshment Rooms, Battersea Park.*—Messrs. Lathey say their tender was for "399*l.*," not 299*l.* as printed.

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We are compelled to decline pointing out books and giving addresses.

All statements of facts, lists of tenders, &c., must be accompanied by the name and address of the sender, not necessarily for publication.

NOTE.—The responsibility of signed articles, and papers read at public meetings, rests of course with the authors.

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*Advertisements cannot be received for the current week's issue later than* **THREE o'clock p.m.** *on THURSDAY.*

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QUANTITIES, MEASURING, and ESTIMATING.—A Surveyor of great experience in Measuring, Estimating, and Quantities, will be glad to give TEMPORARY ASSISTANCE. Has had great practical experience in taking and arranging extras and omissions. Would undertake the books and accounts of a builder.—Address, SURVEYOR, 116, Camden-road, N.W.

HOME or ABROAD.—A BUILDER'S FOREMAN requires a RE-ENGAGEMENT on a JOB, or as CLERK of WORKS. Carpenter by trade. Well up in measuring, quantities, &c.—Address, S. B. Mr. Hine's, Rose Cottage, Bellamy-street, Balham, S.W.

A SURVEYOR, formerly of London, now and for some time past taking part in the direction of an extensive building work, on a nobleman's estate in the country, where he has been engaged in the interests of both sides, seeks change, and wishes to receive an offer of EMPLOYMENT elsewhere, upon reasonable terms of pay.—Address, No. 663, Office of "The Builder."

A FIRST-CLASS ARCHITECTURAL DRAUGHTSMAN and COLOURIST, experienced in engineering works, accustomed to abstracting and billing, quantities, and measured work, good ornamental and plain writer, requires a permanent ENGAGEMENT. Country preferred. Excellent testimonials from former employers. Aged 28. Salary, 2½ guineas per week.—Address, X. L. C. R. Post-office, Store-street, London, W.C.

A FIRST-CLASS ASSISTANT, well versed in Gothic and Classic design, detail and working drawings, perspective, &c. desires an ENGAGEMENT.—Address, ARCHITECT, Delany's Library, 353, Fulham-road, S.W.

TO ARCHITECTS.

A FIRST-CLASS ASSISTANT, completing an engagement at the end of this week, is desirous of obtaining a RE-ENGAGEMENT immediately. Well up in working drawings, details, perspective, and competition drawings.—Address, No. 658, Office of "The Builder."

A FIRST-RATE QUANTITY CLERK and fair DRAUGHTSMAN wishes temporary EMPLOYMENT. Terms 9d. an hour for Drawing. Good references.—Address, B. A. P. No. 65, King William-street, City.

A FIRST-RATE DRAUGHTSMAN undertakes WORK at his own Rooms, on Moderate Terms. N.B. Perspectives and Competition Drawings effectively and artistically coloured.—Address, 593, Office of "The Builder."

AN ESTIMATING, MEASURING, GENERAL CLERK, who has had much experience in arranging complicated and neglected accounts, desires an ENGAGEMENT. Temporary or partial not objected to. Joiner by trade.—Address, LESLIE, 39, Shepperton-street, Islington.

AN experienced Builder and Surveyor wishes for EMPLOYMENT as GENERAL FOREMAN or CLERK of WORKS in London, or elsewhere.—Apply to J. S. care of Messrs. Bridges, Santell, Heywood, & Co. Solicitors, 23, Red Lion-square.

TO BUILDERS.

AN OUT-DOOR FOREMAN (Joiner) of considerable practice, in carrying out buildings, wishes for an ENGAGEMENT for a JOB, or to manage a small shop and buildings. Good references.—Address, C. W. 29, Ann-street, Waterloo-road, Lambeth, S.E.

TO BUILDERS, &c.

A FOREMAN, experienced in the general management of buildings, WANTS an ENGAGEMENT or CHARGE of a JOB.—Address, W. W. 5, Addington Crescent, York-road, Lambeth, S.E.

A RE-ENGAGEMENT WANTED, as CLERK of WORKS or GENERAL FOREMAN. Good references.—Address, B. A. 16, York-street, Covent Garden.

GRAINING AND WRITING.

A FIRST-CLASS GRAINER and WRITER is open to a JOB.—Address, B. YOUNG, 186, Vauxhall-bridge-road, Pimlico.

BUILDER'S ASSISTANT.—Temporary ASSISTANCE can be given by the Advertiser, who is well up in MEASURING, ESTIMATING, &c. and has a thorough knowledge of out-door work.—Address, A. B. Post-office, Ball's Pond-road, N.

TO BUILDERS AND CONTRACTORS.

CLERK or TIMEKEEPER.—WANTED, a RE-ENGAGEMENT, by a young Man as above. Has been in the Office two years and a half. Good bookkeeper. Excellent references. Age 19.—Address, J. W. at Wilkin's, Stationer, 5, Omega-place, Blandford-square, N.W.

## AUCTIONS—*see also page* xvi.

LEIGHTON BUZZARD, BEDS.—The Corn Exchange premises, Leighton Buzzard, with its magnificent and spacious hall and assembly-room, committee-room, auto-rooms, and necessary appendages; the Wine Merchant's Offices, forming most valuable frontages to the Corn Market, with its convenient and extensive cellars; the PUBLIC-HOUSE LICENCE; and other useful rights and privileges, will be SOLD by AUCTION, by

MR. GOTTO, at the HALL of the CORN EXCHANGE, Leighton Buzzard, on TUESDAY, JUNE 25th, 1872, at THREE for FOUR o'clock. The building is well adapted for balls, concerts, public meetings, dinners, and gatherings of like nature and for such purposes, in addition to its revenue as a Corn Exchange. The annual rent has reached 418l. 12s. and under energetic management is capable of considerable increase. It is also capable of being converted for manufacturing purposes.—Conditions will be produced at the Sale, and particulars obtained of Messrs. WILLIS, Solicitors, Leighton Buzzard; Messrs. BECK & GREEN, Solicitors, Northampton; and of Mr. GOTTO, Land and Estate Agent, The Cross, Leighton Buzzard.

RED-HILL, SURREY.—Important Property and Building Land contiguous to the Station.

MR. JOHN LEES is instructed to SELL, by AUCTION, at the MARKET HALL, Red-hill, on WEDNESDAY, 5th JUNE, at TWELVE o'clock, in three lots, an extensive BUILDING ESTATE, with cottage thereon, having an extensive frontage to the Brighton road, near to the Market-hall, admirably adapted as a site for trade or other premises; also four houses, with large gardens, situated in Warwick-road, and abutting on the building land aforesaid, let at rents producing 73l. a-year; a corner house, with shop and eight cottages, in South-street, let at rentals amounting to 136l. 10s. per annum. The property is held for long, unexpired terms, at nominal ground-rents, and offers an eligible opportunity for investment.—Particulars may be obtained of Messrs. READ & SON, Solicitors, East Grinstead, Sussex, and 94, Cannon-street, London; of A. R. STENNING, Esq. Architect and Surveyor, 157, Fenchurch-street; and of Mr. JOHN LEES, Auctioneer and Estate Agent, Reigate, Surrey.

The Builder.

VOL. XXX.—No. 1530.

*The Sefton Park, Liverpool.*

SEFTON PARK, in Liverpool, which was formally opened the other day, as we have already mentioned, by Prince Arthur, is, of course, still in a comparatively embryo state, only small portions being yet planted, and the whole wearing the raw aspect which always belongs to a newly laid-out park, and which it is the work of a good many years to wear off. Sufficient, however, is apparent of the general design of the grounds to indicate that this park, if adequately completed, will be a very successful piece of work, and form, perhaps, one of the most interesting and picturesque suburban pleasure-grounds in the kingdom. The general arrangement may be best indicated by saying that it includes an inner and outer "boulevard" surrounding the park, not however in regular circles, but in irregular curves, the two lines of drive occasionally meeting; the centre space, interior to these, being occupied partly by ornamental water, shrubberies, and foot walks to the west of the water, and open ground, to be used apparently as building land, towards the east and north. By a happy advantage taken of the natural dip of the ground at this point, the two boulevards form on the west side of the lake parallel promenades on different levels, the foot-walk by the lake-side forming lower down a third promenade below these, reached by steps from the inner boulevard: when the sloping banks above the lake-side are well planted, the effect, on a *fête* day, of these three tiers of promenades rising one beyond the other (the two upper ones admitting of the passage of carriages) would be very gay and animated. The water in this, the southern extremity of the park, forms a large open irregular lake, intended to be devoted partly to the display of model yacht races. From the north end the water comes down to the principal lake through a series of smaller ponds and rivulets, falling occasionally in small cascades over artificial rocks, winding round islets occupied by flower-beds, and appearing to issue, at its source, not, like Coleridge's sacred river,—

"From caverns measureless to man,"

but from a pillared grotto sufficiently spacious to be a delight to children and nursemaids. All this is really very pretty, however, as a piece of ornamental gardening, and a very pleasant mimicry of the process of nature, if only the channels and cascades can be supplied with abundance of water; otherwise it will be, as at the time of our visit it appeared, an unfortunately ambitious attempt to do more than can be done for the money. It is to be hoped this will not be the normal state of things, lest the artificial river should echo the complaint of "Bruar Water" in Burns's poem,—

"That by a bard I should be seen,
Wi' half my channel dry."

The arrangement of the lake side-walks, by the way, may be open to question: there is a natural impulse in the popular mind, certainly, to get close to the edge of the water in a park, and there are effects of reflection to be had thereby, too, not otherwise attainable; but these will not quite compensate for the beautiful effect obtainable by carrying green shelving banks and foliage right down to the water's edge, after the manner to be seen in the park on the other side of the Mersey, at Birkenhead, laid out originally by Paxton. The general arrangement of the walks and contours of the ground is such as to be available, where the trees are planted and properly grown, for producing pleasing surprises of vista, and giving to the visitor that idea of extent which adds so much to the value of the space occupied in a park: this is not done, however, so completely and happily as we have seen it accomplished in some smaller works of the kind; but it may have been thought that with so much space at disposal any such attempt to increase the apparent extent were of minor importance. Of architectural embellishment the park has nothing as yet, except the abutments for a good sized bridge to carry the inner boulevard over one of the hollows; let us hope the bridge is not to be a "thing of beauty" of the modern engineering type, the reverse of "a joy" for ever. The smaller adjuncts, such as gate piers and railings, do not show any particular taste or novelty of design; and we saw with regret, dispersed about the grounds, those ludicrous travesties called "rustic" iron seats, or seats carried on cast-iron imitation of twisted branches and twigs. Is there no one to tell the corporation of Liverpool that such things are ridiculous, and an offence against common sense and artistic sense alike? That body have now, we understand, taken the oversight of the park into their own hands, from those of Messrs. André & Hornblower, who gained (and well merited) the first premium in the original competition. The reasons of the change we are not concerned with; but it is to be hoped the corporation will find some competent person to act for and advise them in matters (especially) affecting the architectural embellishment of the park. Much may be done in this way either to improve or to spoil a site which contains most of the materials for making a very beautiful suburban place for residence and recreation.

## THE STRENGTH OF BUILDING MATERIALS.

THE paper recently read at the Royal Institute of British Architects, "Our present Knowledge of Building Materials and How to Improve It," by Captain Seddon, R.E., contains some valuable matter. We print portions of it, and advise those who are interested in the subject to obtain it for themselves from the Institute.*

Engineers have, to a greater extent than architects, been compelled to study the nature and strength of materials, and especially of iron, which (used as it is by the former for every kind of work) has to be dealt with so as to economise both weight and material to the utmost, and to make the best possible use of its enormous powers of resistance to strains of every description. In fact, the extensive use of iron for constructive purposes may almost be said to have given birth to the profession of civil engineering as distinct from that of architecture, the result of which has, I think, been a tendency to too exclusive a cultivation of art on the one side, and of science on the other, to the manifest disadvantage of both professions.

Inasmuch as the architect aims at the beautiful in his constructions, as well as the useful, his profession is of a more elevated character than that of the engineer; for by assisting to cultivate the public taste he leads towards the source of all beauty and purity. Engineers confining themselves too closely to one idea—namely, the theoretical perfection of their work—have fully met the want that gave them birth, have shown how maximum results may be obtained from a minimum expenditure on labour and materials; but in mastering science they have too much neglected art, and even at times justified the absence of any aim at the beautiful, by affecting to rise above such ideas into the regions of the stupendous and the grand; but, unfortunately in minor undertakings, in little works which cannot aspire so high, we still find the same absence of any attempt to please the more cultivated feelings of our nature; or if the attempt is there, it is mostly too evident that a given sum has been expended upon purchasing a mask to hide not the loveliest of structural details below.

The question which I mean to raise is, whether we are yet sufficiently acquainted with the properties and strength of the different materials in common use for building purposes to enable us to employ them to the best advantage, or to allow of our calculating with accuracy the amount of material necessary, in every part of a structure, to meet the different stresses called into play?

It may be said by some, What more information do we want than that already within our reach? There are handbooks enough, in all conscience, with copious tables, giving the strength of all kinds of materials under every description of stress, and formulæ for calculating the requisite dimensions of beams, columns, &c., of different forms and under varied conditions: surely we are in possession of all the information any one could possibly require. Nevertheless, I think it must be admitted, on a little reflection, that the present state of our knowledge in these matters is, in face of the boasted enlightenment of the nineteenth century, by no means so satisfactory as at first sight might be imagined; or in any way sufficient to warrant our resting content without making any further researches.

Most of the data upon which calculations have hitherto been based, have been derived from experiments made on picked specimens, too small in size, and too free from such ordinary defects as are sure to occur in larger specimens, to give us very reliable grounds to go upon; the result being that we are forced to supplement our defective knowlege by using large factors of safety; or, in other words, by not straining the material used to anything like its estimated powers of resistance.

*Timber.*—Taking the subject of *Timber* first, I cannot perhaps do better than quote from a valuable little treatise lately published by Mr. B. Baker, C.E., "On the Strength of Beams, Columns, and Arches." At page 127 he says:—

"Unfortunately, most of the careful experiments of Tredgold, Barlow, and other early investigators were made on small pieces of timber, straight-grained, and free from knots and other defects; a condition favourable, it is true, to the comparison of the results of mathematical investigation with those derived from direct experiment; but, on the other hand, leading to errors of much greater moment in actual practice, since (as every workman knows) a piece of timber uniformly sound throughout can never be reckoned upon." He then goes on to show the per-centage of loss of strength due to the inevitable defects in large scantlings, as follows:—A piece of English oak, 2 in. and 1 in. square, gave a result equivalent to a breaking weight of 8½ cwt. applied at the centre of a 1-in. square bar supported on bearings 12 in. apart, giving a calculated stress on the extreme fibres of the bar equal to 7·6 tons, or 17,024 lb. per square inch, a surprisingly high, and, as far as practical cases are concerned, a palpably exaggerated result. Whereas, taking a larger scantling of oak, 11 ft. 9 in. long and 8½ in. square, the calculated stress on the extreme fibres, when rupture took place, was only five tons, or 11,200 lb., instead of 17,000 lb. per square inch; and a larger beam still, 24 ft. 6 in. long, 12¼ in. deep, and 10¾ in. wide, gave a result equivalent to less than one-third of that given by the small selected piece. He then says:—"This reduced amount shows that the average strength of the timber in this large beam was less than one-third of that in the small selected piece; and we think no further illustration is required to show the necessity of neglecting the majority of experiments made on small scantlings of oak, when deducing rules for practical application. We find the same conclusions hold good with reference to Riga, Memel, pitch pine, and other soft woods," the standard bar, 12 in. by 1 in. square, giving a maximum stress on the fibres of 3½ to 4¼ tons per square inch, whilst experiments on a beam 15 ft. long and 12 in. square give a maximum stress of only 2¼ tons per square inch.

If we turn to Molesworth's "Handbook of Engineering Formulæ," and Hurst's "Architectural Surveyor's Handbook," both of which are books purporting to supply all the latest information brought up to date each year, we find the value of the constant to be applied in the formula for beams under transverse stress, given as five for English oak, 5 cwt. being taken as the central load required to fracture a standard bar, 12 in. long and 1 in. square; although the tensile strength of oak in pounds, in Molesworth's Handbook, is given as 17,000 lb., which would give 8½ cwt. instead of 5 cwt. as the central breaking load. Professor Rankine, in his "Rules and Tables," gives 10,000 lb. to 19,000 lb. per square inch, as the tensile strength of oak, and 12,000 lb. to 14,000 lb. for fir or pine.

* Sessional Papers, 1871-72, No. 10.

Now let us glance at the crushing strength of timber, as given by different experimenters.

Rondelet gives the crushing strength of pine as 54 cwt. to 62 cwt. per square inch, and that of oak as 45 cwt. to 54 cwt.

Tredgold took 36 cwt. for both.

Rennie gives the strength of pine at 14 cwt., and of elm, as low as 11½ cwt. per square inch.

Hodgkinson gives 92 cwt. for elm, 90 cwt. for oak, and about 54 cwt. for pine.

Lastly, I have here the results of some experiments made by Mr. Kirkaldy, on two logs 20 ft. long about 13 in. square, one of white Riga and the other of red Dantzic fir, which show, in the first case, a resistance to crushing of 17·5 cwt., and in the last of 15·5 cwt. per square inch. Both balks failed by crushing, the lateral deflection not exceeding ·64 of an inch in either case. These results approximate closer to those made by Rennie than any of the others.

Here is a mass of conflicting evidence, notwithstanding the apparent simplicity of the subject; and yet it is by no means as simple as it seems. The conditions were, no doubt, very different in each set of experiments; the apparatus employed was different, there were different observers, and therefore it is not to be wondered at that the results arrived at differ. In fact, the seasoning alone of the specimens would at once account for a great part of the difference; for green timber, from the moisture in it reducing the lateral adhesion of the fibres, has not more than half the strength of dry timber, and yet if artificially overdried, a considerable loss of strength would be the result.

With regard to the transverse strength of *timber* beams especially, though the same remarks apply to those of iron or any other material, what would appear to be an important element in their strength, though hitherto omitted from all calculations, is the lateral adhesion of the fibres to each other.

*Iron.*—I now come to the subject, and a most important one, of iron. Notwithstanding the great advance which has of late been made towards a more perfect acquaintance with the properties of irons of different classes, and notably by means of the numerous experiments made by Mr. Kirkaldy, and the stimulus which has been given to the manufacture of high-class irons, by the rival contests between iron guns and iron shields, it must be admitted, even by those who have made it a subject of special study, that there is very much yet to be learnt about iron; whilst, if we except a small circle, whose special employment has caused them to follow with interest in the track of every experiment which could throw any light upon the nature and properties of the material with which they are chiefly called upon to deal, there is a general lack of knowledge about the whole subject; besides much misconception, which the clear proof of practical experiment will alone be able to sweep away.

As a building material, iron is day by day forcing its way everywhere, and many, who not long ago would have set their faces against its use in structures aiming at a high class of art, no longer hesitate to call in its valuable assistance in order to solve constructive problems which would be beyond the reach of wood, brick, or stone,—at any rate, within any reasonable limits of expenditure. Such being the case, it is essential that its properties should be thoroughly understood by all those who are likely to make use of it for constructive purposes, and that they should not merely order a girder, for instance, to carry a given load, leaving the designing of it to the manufacturer or his agent, whose interest it is to run up the weight, and hence the price, at the expense of quality and good workmanship.

It may safely be said that there is no material so dangerous to trust to, without a full knowledge of its behaviour under different conditions, than iron; whilst there is none which varies so much in quality, or in the manufacture of which there is more knowledge, experience, skill, and care required, or which admits of more deception being practised upon the unwary by unscrupulous and dishonest manufacturers.

Now I think that, beyond the difference between cast and wrought iron, and the inferiority of the former, when exposed to the effects of sudden shocks, there is very little accurate knowledge on the subject of the properties and powers of resistance of different classes of iron under varying conditions of stress. Their behaviour under different circumstances, such as tension, compression, shearing, bending, torsion, either suddenly or gradually applied, varies so widely according to the description of the iron under trial, that the strongest proof which could be adduced of the necessity for a far wider acquaintance with the subject is given by the ordinary formulæ in use for calculating the strength of iron girders, &c.

* * * *

*Stone.*—Passing on to another material, let us see whether we ought to rest satisfied with what we know about building stones.

Here again the majority of experiments made have been upon very small specimens, such as small cubes under compression, whilst the recorded results vary with each set of experiments, according to the amount of accuracy capable of being arrived at by the machinery made use of, as well as the skill and care with which the experiments were made and recorded.

If we take a stone which has been more largely used perhaps than any other, namely, Portland, we learn from Barlow that its crushing strength ranges from about 1,384 lb. to 4,000 lb. per square inch, whilst in the experiments made by this Institute, and recorded in your sessional papers for 1864, the mean resistance to crushing, per square inch, arrived at was, for 2-in. cubes, 2,576 lb.; for 4-in. cubes, 4,099 lb.; and for 6-in. cubes, 4,300 lb.

According to Rennie its crushing strength may be taken as 3,729 lb. per square inch, which has been followed by Molesworth in his "Handbook," whilst in Hurst's "Handbook" it is given as 2,022 lb. per square inch.

Now the many varieties of Portland stone, apart from and different method or course pursued in making the experiments, and the amount of seasoning the blocks had undergone, all points which should be carefully recorded, would fully account for the manifest discrepancies between these results; in addition to which, the direction of the natural bed of the stone, which in a small block of Portland might escape detection, would no doubt make a considerable difference. For instance, turning to some experiments by Mr. Kirkaldy on the resistance to thrust of Doulting stone (a Somersetshire oolite),* which I believe to be the only known experiments on this point—if we except two on York paving and Bramley Fall stone, recorded by Rennie, in which the crushing strength both with and against the strata are given as precisely the same, a coincidence too good to be true—the advantage of laying the stones on their natural beds is considerable, increasing rapidly with the increase in height of the block, in proportion to its sectional area; which, I think, is what we should naturally be led to expect, if we look upon the block as approximating, more or less, according to the amount of lamination in the stone, to a number of thin columns placed side by side. More experiments, on a larger variety of stones, are much wanted to throw additional light on this subject.

With regard to the supposition that the crushing strength of stone increases with the size of the blocks under trial, there has yet been too little proof put forward on which to lay down any law. In fact, the few experiments made by Mr. Kirkaldy, bearing on this subject, some of the results of which have been placed at my disposal, go to prove that there is no increase in the resistance to crushing, consequent upon increase in the size of the blocks.

With regard to another of the oolites, namely, Bath stone, there is, I think, a good deal of misconception, which a careful series of experiments would soon clear up. For instance, Farleigh Down, being a little more expensive than Box Ground stone, is very generally looked upon as the best and strongest description of Bath stone for outdoor use, and is accordingly very often insisted on in specifications, the fact being that, on account of the stone being more difficult to get out of the quarries, especially in large blocks, the price runs a little higher, whilst in strength or endurance it is not known that it can claim any precedence over Box Ground stone. From the experiments already referred to as recorded in your sessional papers, it would appear that Corsham stone is considerably stronger than Box Ground, though this is opposed to the results of other experiments. The durability of Bath stone mainly depends on its being placed on its natural bed, which can only be detected by an experienced eye, or by working the stone; though when not so placed it soon reveals the secret, especially where exposed to the weather, by its cracking and peeling away on the face.

Much also depends on its being well seasoned, or air dried, before being put into the work; therefore the stone should only be got from quarry-owners who keep large stocks of seasoned stone on hand. If quarried in the spring of the year, and stacked at open order during the summer weather, it is doubtful whether Corsham stone is not well able to resist the weather, though it is generally considered only fit for indoor work.

Artificial drying, which has sometimes been resorted to, should not be allowed. In one case a large quantity of picked Bath stone, which had been dried by heat, had to be condemned, and, I believe, led to a lawyer's bill, in consequence of the breaking up of the stone under exposure to the weather, owing, I fancy, to the unequal contraction and expansion of the dried and hardened surfaces, and the soft and green interiors of the blocks. I have seen stone, which had worn well exposed to the weather, crumble away on being shifted to the inside of a house.

With regard to sandstones, the information contained in architectural and engineering handbooks is next to nothing; in fact, in Molesworth the whole subject of sandstones is comprised in the information that their crushing strength is 5,000 lb. to the square inch, which, being an easy round number to remember, might with equal reason be adopted as the crushing strength of all stones.

Very little is known with regard to the transverse strength of different kinds of stone, though there is no doubt that some are much more capable than others of taking a bending stress.

Stone is a material specially unsuited to resist any stress except compression, and it is the true appreciation of the nature of stone as a building material, by the almost exclusive use of it to the best advantage, namely, under compression, by the Mediæval builders, that, to my mind, marks their great superiority, as scientific builders, over their predecessors of more refined classic ages.

In practice, however, we constantly find stone subjected to bending stress, and that further information under this head is required, struck me very forcibly some little time ago on seeing some stone stairs, two stories high, being carefully propped up with wood, many of the steps having split right across close up to the wall. The steps were feather-edged, of Portland stone, 11½-in. treads, and 6½-in. risers, and had been exposed to the ordinary traffic of an office for about sixty-two years. The treads being much worn, a mason had been at work cutting them down at the top, preparatory to fixing an iron nosing, and filling the treads up level with asphalte, when the step he was at work on cracked close up to the wall, probably from the jarring caused by the strokes of the chisel; shortly after, several of the steps above cracked too, being no longer supported by those below, and being evidently unequal to do the work suddenly thrown upon them. Stairs with the steps only supported in the wall at one end are of constant occurrence, and serious accidents have sometimes occurred from their sudden failure.

Enough has been said, I think, to prove that more knowledge is required as to the special qualities of different kinds of stone, and their applicability to particular uses; but there is still another point about which there is not at present any certain knowledge, namely, to what extent the shape to which stones are cut, and the manner which they are bedded, affects their strength.

I have the details of one or two interesting experiments to ascertain the effects of lead placed, as is frequently done, between the joints of cut stone columns, &c., with the object of distributing the stress uniformly over the beds of the stone. The experiments were made upon circular blocks of Bath stone (Box Ground and bottom-bed Corsham Downs) 3 ft. long by 10½ in., and 15 in. diameter, or one set twice the area of the other; the lead being cut 2 in. less in diameter than the beds of the stone themselves. The results point to the conclusion that lead so placed between the beds of the stones, reduces the bearing strength of a column to considerably less than that of a column, of only half its sectional area, in which the stones are completely bedded. On examining the sheets of lead used in the joints, they seem to have been under compression at a very few points only, and not to have in any way tended to equalise the pressure over the area of the joints. These experiments also seem to indicate that raking out the joints of cut stone work, to save the arrises in cases of any compression of the joints, when bedded in mortar, should not be carried too far. Such questions are, at any rate, worth investigation.

* Given recently in our pages.—Ed.

In all experiments upon stone, it is essential to know the exact description of the stone, the quarry it came from, and, if possible, the particular bed in the quarry. The time the specimen has been quarried should be stated, as some stones when green will stand very little stress, but harden considerably, in a longer or shorter time, when exposed to the air. If the specific gravity, or weight per cubic foot, of the specimen were given, it would afford some clue to the state of the specimens experimented on.

While on the subject of stone, I may refer to an artificial stone, widely used in the present day, viz., concrete. I think you will agree with me that a series of carefully-made experiments on the strength of different kinds of concrete would be of great value, under varying conditions, as to the nature of the lime and cement used, the description of ballast, proportion of large and small stuff, and mode of mixing.

With good Portland cement, well burnt and well ground, I should use with confidence for ordinary foundations twelve ballast to one cement, provided I was sure of its being properly mixed; but with ordinary workmen, not properly drilled in mixing the materials, ten to one would probably be more advisable. It would be well to know how much the strength of concrete is affected by the different methods of mixing in vogue. For my own part, I should insist upon the mixing being performed as follows:—A yard-measure to be half-filled with ballast, then the measure of cement to be added, and the yard-measure filled up to the top with ballast. On removing the measure the ingredients get partly mixed, and the cement does not get blown about so much as when placed at the top of the heap; it should then be turned over twice dry, and shovelled into a third heap, each shovelful being sprinkled from the fine rose of a watering-can as it is thrown on the heap, whence it may then be removed to the trench's. This block has been broken with a pick out of a newly-built dock-wall, in which 12 to 1 Portland cement concrete, mixed in the manner described, was employed, and I think it is strong enough for any foundations. In making experiments, the mixing should be done in bulk, at least half a yard cube, being mixed at a time and not in small quantities, which are more carefully prepared than would be the case in practice; and the blocks should be at least 12 in. cubes.

Passing from concrete to mortars, the results of some experiments made for the Patent Selenitic Mortar Company show that, in mortar made with common stone lime,—Burham, or grey chalk lime, similar to Dorking lime, was used,—3 sand makes a stronger mortar than only 2 sand, and stronger again than 4 sand; which is probably due to 3 to 1 being about the point at which more sand would weaken the cohesive and adhesive properties of the mortar to a greater extent than its setting or hardening would be promoted by increasing its porosity. With selenitic mortar, 5 sand was the best mixture to resist thrust, then 4, than 6 sand; but for adhesion and to resist tensile stress, 4, and then 6, and then 5 sand. From which we gather that 3 to 1 is the best proportion of sand to stone lime in common mortar, and 6 to 1 in selenitic mortar, since the latter gives a mortar possessing double the strength of common stone lime mortar. However, in using the selenitic mortar at Chatham lately, 6 to 1 was not found to give such good practical results as 4 and 5 to 1, which is being now used. Although the 6 to 1 mortar set very hard, it was so short that it took longer to work, the loss of time outweighing the saving of sand. The proportions now being used are 4 to 1 for exterior work, and 5 to 1 in the body of the walls. Mr. Street has, I believe, had some further experiments made with the selenitic mortar in connexion with the New Law Courts.

*Results of Experiments to ascertain the Resistance to a gradually increased Thrusting Stress of Four Columns of Bath Stone.*

"BOX GROUND."

*Ex.* 577,—

Diameter { 10·41 / 10·73 } = 10·57 in.

Area, 87·70 square inches. Length, 35·06 in.*

61,730 lb., or 27·56 tons = 704 lb. per square inch. Cracked at both ends of column, and very rapidly extended the whole length; part of lead at one end not marked.

1,088 lb. per square inch of lead area.

*Ex.* 578,—

Diameter { 14·97 / 15·03 } = 15·00 in.

Area, 176·71 square inches. Length, 34·52 in.*

10,680 lb. = 570 lb. per square inch: very slightly cracked.

143,950 lb., or 64·25 tons = 815 lb. per square inch. Cracked in all directions; lead at both ends uniformly marked.

1,084 lb. per square inch of lead area.

"BOTTOM BED CORSHAM."

*Ex.* 579,—

Diameter { 14·94 / 14·98 } = 14·96 in.

Area, 175·68 square inches. Length, 34·92 in.*

97,920 lb., or 43·71 tons = 556 lb. per square inch. Very slightly cracked.

120,730 lb., or 53·90 tons = 687 lb. per square inch. Only one half of circumference cracked. Markings on lead prove that the ends had not been formed quite true.

*Ex.* 580,—

Diameter { 10·55 / 10·59 } = 10·57 in.

Area, 87·70 square inches. Length, 34·92 in.†

122,280 lb., or 54·60 tons = 1,394 lb. per square inch. Very slightly cracked at one end.

130,810 lb., or 58·39 tons = 1,499 lb. per square inch. One end uniformly cracked all round, the other end but slightly.

The last two experiments reveal the startling and important fact that a column properly bedded is very considerably stronger than one of double the area improperly bedded.

* Bedded with 4 lb. sheet lead, cut 2 in., less diameter than column according to instructions.

† Bedded with pine ½ in. thick, cut to same diameter as column, as always recommended by me.

*Results of Experiments to ascertain the Resistance to Thrusting Stress of Six Cubes of Red Sandstone (bedded with Pine ½ in. thick).*

| Test No. | Quarry. | Dimensions. H. L. B. | Base Area. | Cracked slightly. | | | Crushed, Steelyard dropped. | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Stress. | Per sq. in. | Per sq. ft. | Stress. | Per sq. in. | Per sq. ft. |
| Ex. | | Inches. | Sq. ins. | Lbs. | Lbs. | Tons. | Lbs. | Lbs. | Tons. |
| 1,892 | "O" Ormside | 5·98 5·95 × 5·93 | 35·28 | 85,270 | 2,416 | 155·4 | 118,160 | 3,349 | 215·3 |
| 1,891 | "O" do. | 5·95 5·95 × 6·00 | 35·70 | 84,20 | 2,356 | 154·5 | 117,720 | 3,298 | 212·1 |
| 1,893 | "O" do. | 12·00 11·96 × 12·02 | 143·76 | 346,620 | 2,411 | 155·1 | 443,930 | 3,088 | 198·6 |
| | | | | Mean... | 2,394 | 154·0 | Mean... | 3,245 | 208·6 |
| 1,895 | "D" Dufton | 5·94 6·00 × 5·98 | 35·88 | 83,520 | 2,328 | 149·7 | 93,870 | 2,617 | 168·3 |
| 1,894 | "D" do. | 5·90 5·94 × 6·00 | 35·64 | 81,270 | 2,280 | 146·6 | 92,580 | 2,599 | 167·1 |
| 1,896 | "D" do. | 12·00 12·00 × 11·90 | 142·80 | 323,880 | 2,268 | 145·9 | 358,230 | 2,509 | 161·3 |
| | | | | Mean... | 2,292 | 147·4 | Mean... | 2,575 | 165·6 |

## THE FRENCH AND FLEMISH EXHIBITION.

THE gallery in Pall-mall shows this year less of brilliant and striking achievements in cabinet painting than usual, but not less than usual of solid and admirable workmanship, as well as originality of conception, in the part, especially of some of the French contributors. The most important of the larger works exhibited is, however, neither French nor Flemish, but the work of (if we mistake not) a Russian, Mr. Munkacsy, though illustrating a French subject, and painted in a French manner. "The Time of War—making Lint for Hospitals" (152), is a long composition of figures seated along a table engaged in lint-making, but with their attention more or less diverted from the work in hand by the interest with which they listen to a wounded soldier seated at one end of the apartment, on the left; this arrangement of the composition gives opportunity for a very varied display of interest and expression in the faces, one behind another, nearly all turned towards the narrator, or giving otherwise evidence of their attention. A fair-haired young girl in black is the most prominent figure among the listeners. Between her and the soldier sits, on the other side of the table, a boy of almost idiotic vacancy of expression, mechanically going on with his task, behind whom stands a fine-looking elderly gentleman, with thoughtful countenance, taking in every word of the story: the four form an admirably contrasted group; there are other figures that will well repay attention. The colour is low, which is perhaps suitable to the feeling of the subject; a little more concentration of the light would not have been amiss. Not far from this, "Faust's First Sight of Marguerite," by A. Liezenmeyer (140), gives us a beautiful and, in some degree, original treatment of the old story, which so many painters have vied with each other in illustrating. Marguerite, a sweet, modest-looking country girl, walks from the porch on the left, close in the foreground, her quiet graceful figure brought out by contrast with the disagreeable-looking old people who leer spitefully at her, behind; in the centre are Faust and the tempter—the latter a comparative failure, as usual, and looking rather mischievous than coldly scornful; Marguerite is in a dark dress, Faust chiefly in red, the colour-effect being rich and harmonious; the subordinate figures are painted in very flatly, in thin, low tints; the architectural background even more slightly, but with sufficient attention to form and light and shadow. Among the leading and well-known French names, that of Gerôme is represented by as able and finished a painting as one could wish to see,—"A Street Scene in Cairo" (44),—though in this case the interest is rather in the verisimilitude of the representation than in the subject itself. The woman in a dark robe, with a netful of lemons, and backed by another in a blue robe, is, however, a splendid bit of colour. The little painting called "A Dispute" (56), on a very small scale, showing two men, in gorgeous Eastern costumes, disputing with a dark man, in a white linen dress, as to the hire of a camel, has more artistic interest, and is a masterpiece in composition as well as in execution. The light from the little traceried window, seen at the end of an arcade, really sparkles. The same painter's marvellous picture of "Eastern Women" is still on view in the upstairs-room, and looks as well as it did last year. Meissonnier has a "Vedette" and a "Standard Bearer" (47 and 61), in his usual manner, and with his usual finish. "The Doubtful Answer," by Willems (79), a lady, in red jacket and white satin, with pen held thoughtfully to her chin, we notice, not only for usual technical execution of the costume, in which this artist, in every sense, "shines," but for the pleasing fact that there really is character and expression in the face (a plain one), and that the figure is not here a mere clothes-horse to hang silks and satins upon. Aubert's "Miranda" (80), next to this, illustrates amusingly the total incapacity of the French nature to deal with a female character so natural, fresh, and simple as Shakspeare's exquisite creation. Miranda is certainly "translated" here into French, and fares accordingly. The street Arab who "lives by his wits" (8) looks as if he had plenty to live by. This is a first-rate study by L. Knaus, apparently from life. It shows, however, what we may call the ostentation of dispensing with colour which a certain school of Continental artists affect: a red cap, or something to give a point of colour amid the prevailing dirty brown tone, would surely have done no harm. "Echoes of the Sea" is one of Bougereau's pretty peasant-girls, not equal to some we have seen. "He loves me; he loves me not" (54) is another single-figure subject, by G. Max,—a young girl sitting on a bench, in a pink pelisse, who has apparently resolved the question into a negative, for her eyes are closed sadly, and the flower drops from her hand. The figure is "supported" by two white tree stems behind; there is much quiet beauty in the work. "Market-place, Constantinople" (38), by Pasini, is another of the very minute paintings of which the French school furnishes so many examples, and is an admirable bit of composition, the light comes from the top at the left hand and falls upon a group of small figures arranged pyramidally towards the right, the colour increasing in warmth to the right; this is perhaps, rather too like composition by rule, but there is something in it very satisfactory to the eye. The same artist's larger work, "Up the Valley of Sweet Waters" (72), shows a motley crowd of figures of all nations, on the same minute scale, starting for the journey up the Nile (we conclude); it is a brilliant thing, full of glow and heat and sunshine. "Familienglück" (67), by J. Flüggen, is the largest picture in the room, and should really be looked at, it is such a comfortable exhibition of "domestic bliss" of the heavy-German school, breathing in fact all the moral virtues, but not (unfortunately) the

artistic ones. "On the Road to Naples" (93) is a picture every one will pause before on account of its individuality of subject and tone; it consists mainly of a nearly white sandy road going from the spectator and a yellow Noah's-Ark-looking *diligence* which seems to have come to grief, and to be "on the road" only in the sense that Gilpin's celebrated hat and wig were said to be. Lecompte's "Minnehaha" (99) is a fine life-size study of an Indian woman with a richly-coloured garment bound sash-wise around her; there is little character in it, however. Goupil's "Pleasant Reflections" (110) is in the painter's best way both in execution and expression; a richly-dressed golden-haired lady is seated in an easy chair, before a fireplace with a sumptuous red marble chimney-piece; the texture of the hair, among other things, is excellently and minutely rendered without degenerating into ropiness. Moreau's "Fireside" and Perrault's "Baby Brother" (115 and 118) are each interesting as specimens of their two very different styles. "The Cigarette" and "The New Song" (76 and 82) should be examined as specimens of a new manner,—new here at least; they are Spanish subjects, and by apparently a Spanish name, R. Madrazo. The latter is the larger, and shows an interior of a gorgeously tapestried room, a girl in yellow satin is singing "to the lascivious pleasing of a lute," two men in rich Spanish costumes listening with a kind of free-and-easy admiration; another equally richly-dressed young lady in the background looks on with a smile of jealous sarcasm. The style of execution of these paintings is remarkable, and in its way brilliant in the extreme; the general tone is very light, with much white, something like what we see in Tissot's pictures, but the execution is the very opposite of his, the colour being laid on in such thick masses as in some cases (in the coal-back hair of the male figures for instance) to produce almost an effect of relief; the jewels and ornaments of the dresses are given with the most hard and brilliant reality. The style and feeling of these pictures are anything but elevating, certainly; but it is impossible not to recognise the talent and originality displayed in their execution, and their thorough realisation of Spanish character and nationality of a certain type.

## THE INTRODUCTION OF THE ANGLO-ITALIAN STYLE UNDER INIGO JONES AND SIR CHRISTOPHER WREN.*

THE first of the two names to which I desire to direct your attention is that of Inigo Jones, to whom we owe the introduction of Italian architecture in England. He was born in 1572. It has been said by one of his biographers that he derived his Christian name, Inigo, from some Spanish merchants settled in London at the time of his birth, and who had dealings with his father, who carried on the trade of a tailor, within the sound of Bow bells. Some have said that Inigo was apprenticed to a joiner; while others affirm that he was carefully educated for professional pursuits. All are agreed, however, that in early life he manifested a decided talent for the fine arts, and produced some very good landscape paintings, which are still preserved. To these high talents were united a character for great honesty and general intelligence, which gained him the confidence and patronage of several leading men of the time, among whom are mentioned the Earls of Arundel and Pembroke. By the latter he was sent to Italy to study landscape-painting about the close of the sixteenth century, where he profited greatly by the study of the master-pieces of that country, the cradle as it then was of the revival of the arts of painting, sculpture, and architecture. He proceeded to Venice, where the works of Palladio inspired him with a love for the study of architecture. Nor can we wonder at this, when we picture to ourselves the city of Venice, as it then appeared rising from the blue waters of the Adriatic, glowing with marble palaces, churches, and other stately buildings. When Inigo visited Venice, Palladio's name was paramount in architecture through Italy, if not throughout Europe, though he himself had been laid quietly in the grave some twenty years before, his works lived, and were becoming each day better known and more admired. Architects from all lands made pilgrimages to the shores of the Brenta and the Adriatic to inspect the masterpieces of his genius,—a genius which appears the more astounding when we recollect that he had for his immediate predecessors such men as Brunelleschi, Leon Batista, Alberta, Bramante, Balthazar Peruzzi, San Micheli, and San Gallo, all of whom had stamped an individuality upon the architecture of their country; but Palladio preferred to go back for his inspiration to the original fountains of antiquity, rather than to follow the fashion of the day, and pander to the growing thirst for novelty and elaboration that culminated half a century later, under the fanciful but meretricious pencil of François Borromini. The wealth and taste of the Venetian nobles and merchant princes found an exponent in the palaces erected by Palladio with so profuse a hand in and around the fair City of the Waters.

Under his hand a bare and uninteresting island became a shrine of art and a dream of the imagination for ever. Those who visit Venice now in its decay and desolation, can form but a meagre notion of what it was at the time of our architect's visit, flashing back the sunshine from its gilded spires, and, by its colour, and the beauty of its architecture, presenting a thousand pictures, which such a mind as that of Inigo Jones could so well appreciate and enjoy. Of Palladio it has been said, and said with justice, that "None of his predecessors, in imitating the antique, had so happily steered the middle course between exactness and pedantry, and given us severity without rudeness, liberty without license, and so well succeeded in popularising the ancient architecture of Greece and Rome, and drawing it in to serve the wants and desires of his own age and country." This does not apply to Italy alone, for it was from the works of Palladio that both Jones and Wren, both Gibbs and Chambers, drew so largely in their English buildings during the seventeenth and eighteenth centuries. Not alone in Italy and in England, but soon throughout Europe, the taste of Palladio became predominant. We can well understand how much our architect profited by his visit to Venice, then glowing, as we have said, with the gorgeous and beautiful works recently completed by that master-hand, a master who had also enriched the literature of his profession by a treatise on architecture, which proved his erudition to be equal to his artistic powers and antiquarian researches. This splendid book went through three editions, and was translated into all the languages of civilisation.

Inigo Jones would doubtless also visit Rome, and see the grand frontispiece of St. Peter's, proceeding under Charles Maderne, and the many noble works then in progress by Dominique Fontana, much employed in the Imperial City, and the architect of the Palace of St. John Lateran, but in none of these works at Rome, or Venice, can we now trace anything which has been directly copied by Inigo Jones in his own productions.

During his stay in Italy, Inigo Jones attracted the attention of King Christian IV., of Denmark, by his great abilities, who thereupon became his patron, and invited him to his country, and on the occasion of Christian paying a visit to his brother-in-law, James I. of England, in 1606, Inigo Jones accompanied him, where he was induced to remain, having received the appointment of architect to the Queen, and subsequently to Henry, Prince of Wales. He was engaged in London until the death of Prince Henry, in 1612, when he decided again to visit Venice. At this period a new architectural star of that Republic was undoubtedly rising in the person of Vincenzo Scamozzi, who was employed to complete the unfinished works about the ducal palace, commenced by Sansovino, and also some of the master-pieces of Palladio.

Scamozzi had a brilliant intellect, which became developed at an early age. At seventeen he produced beautiful designs for the Counts Godi. He constructed a splendid country mansion for another Venetian noble when quite a young man. The Church of Our Saviour, just finished under another architect, was found to be insufficiently lighted. Scamozzi was called in to remedy the defect, which he accomplished in a most skilful manner, by the introduction of a lantern and three cupolas upon the roof, without at all interfering with the majestic proportions of the interior. Scamozzi, like Palladio, was a thorough archæologist. He went to Rome, and made most careful studies of the Baths of Diocletian, and of the Flavian Amphitheatre, for the restoration of which he prepared a complete set of drawings and he stated that in the two years he was occupied in measuring the works of antiquity among the ruins of the Imperial City, he learnt more than in ten years devoted to other studies. Scamozzi designed the Proscenium of the Olympic Theatre, at Vicenza, left unfinished by Palladio, but which his son and successor Sylla, was unable to complete for lack of special knowledge, and Scamozzi owes his ability to perform this difficult task entirely to his studies of the great Roman remains above referred to. The fault of Scamozzi seems to have been that of undertaking work in different localities, which he was unable to direct in person; hence his designs, beautiful and graceful in themselves, were often mutilated and caricatured in execution under unskilful hands. Even in the buildings opposite St. Mark's there seems to have been a change and falling off in the details as the work proceeded towards completion, mainly for want of due vigilance and supervision. He was an indefatigable writer on the history and science of architecture, versed in the ancient as well as the modern languages, and well fitted for the task of translating Vitruvius, which he successfully accomplished. Inigo Jones, in studying the buildings and books of such men as those we have referred to, and probably enjoying the society of many other artists of note, who then made Venice their capital, became thoroughly prepared for the great undertakings with which he was occupied on being called home about the year 1618 to fill the appointment of surveyor-general, which had just become vacant. You will doubtless remember the duties and emoluments of the surveyor to his majesty's works at the period now under notice, viz., to keep the royal residences in repair, at a daily wage of 8s. 4d., with 46*l.* a year for house rent, and a suit of livery once a year. I suppose a kind of beef-eaters' gold and lace historical costume, which possibly he was not compelled to wear, excepting on state occasions, and at the splendid pageants of which he was the designer.

James I., who had given him his appointment, loved masks and shows, but being poor, wanted them run up cheaply, and the fertility of Inigo's invention made him a useful and ready man for that kind of work. But the king also encouraged Inigo to plan out great and sumptuous works of architecture, that, unfortunately for the architect's fame, the king's purse could not compass, and the nation's would not; however, as architects, we cannot blame the enthusiasm which encouraged Jones in the production of his splendid design for a majestic palace at Whitehall, for these drawings remain to show us more than any of his executed works the grandeur and boldness of his genius. We should have mentioned that Jones, when appointed surveyor-general, displayed both tact and magnanimity, for the Privy Council having discovered that the former surveyor-general had left them encumbered with a heavy burden of debt, sought the advice of Inigo as to the best means of getting it liquidated. He, with a public spirit that does honour to his memory, immediately offered his own services gratis, and went further than that, for he persuaded his coadjutors to remit their emoluments also for a season, by which means the debt was soon entirely wiped out. Reverting again to the magnificent designs for the palace at Whitehall, we are not aware how these were received by the nation, but certainly, judging from the fact of so small a fragment having been carried into execution, we may fairly conclude that the idea was too great either for the taste or purse of the age, or both. In some recent investigations respecting the autograph drawings of renowned architects, certain facts have been educed proving the scarcity of such remains in the great museums and among the archives of learning abroad. We may presume that when the designers saw their parchment visions moulded into the realities of marble, stone, or brick, they cared little for the first draughts in miniature, that to us moderns, now that many of their buildings have been swept away or perished, would possess more than ordinary interest and value. Then of those gorgeous pageants upon the production of which the genius of architects, painters, and sculptors were so freely lavished, we possess scarcely one scintilla of graphic evidence, for the magnificent decorations of the old imperial cities were swept away when the excitements which gave rise to them were over, and the talents of the designer became only an item, though certainly a beautiful once in the memory of the actual spectators. What a choice *répertoire* for coronation days, royal

* By Mr. H. H. Vale. Read before the Liverpool Architectural Society.

marriages, and public thanksgivings would an album of Raffaelle's, Michelangelo's, or Bernini's sketches prove! but alas, they are now beyond reach; sack and pillage have trampled them in the dust, or fire reduced them to ashes, long ago. Inigo Jones does not appear to have been equally gifted as an archæologist as he was an architect and painter, for the treatise which he prepared in 1620 upon the remains of Stonehenge, at the king's instigation, has not been endorsed either by contemporaneous or subsequent authors. Jones seems to have been a man of his day entirely, and no lover of old Gothic forms, and no archæologist. It is our private opinion that he thoroughly detested everything belonging to the English Pointed styles, otherwise he would never have placed that certainly sumptuous but most incongruous frontispiece of his in place of the splendid west end of old St. Paul's, which cathedral was, from all accounts, a marvellous piece of middle-age work, and in its design and the vastness of its dimensions, in our opinion, far too good to become food for powder, as it did shortly afterwards, during the surveyorship of Sir Christopher Wren. It was the old story: ideas of expediency arose, abetted by the voice of fashion, and the old crumbling cathedral disappeared for a worthy although thoroughly different successor. viz., the great master-piece of Sir Christopher Wren. But for the views of Hollar, we modern Goths would never have been able to appreciate the correct state of old St. Paul's; from those views, with all their stiffness, crude perspective, and faulty *chiaroscuro*, we may still eliminate subtle beauties and niceties of form and design, which may be of great assistance to us in our modern compositions.

To go back to Inigo Jones, who, we said, must have been a rare "good hater" of everything Gothic. Of his frontispiece to St. Paul's, a leading foreign critic has written as follows:—"If the mixture of two kinds of buildings be discordant, above all, that of the Gothic taste united with the regular systematic ordinances of the Grecian, and put into opposition with the systematic irregularity of the former, could not fail to wound the spirit and offend the vision." It was not until after the death of James, and during the reign of his successor, Charles I., that Inigo Jones was enabled to realise even that small executed portion of his great Whitehall scheme, the designs for which had been made, as we have seen, under the patronage of the former monarch. He was continued in his office, and encouraged by the new king and his queen. We will not here attempt a description of the great scheme for the Whitehall Palace, the designs for which have become so well known by the published drawings. Palladio and his own early Venetian studies were doubtless fresh in the memory of our architect when he produced the designs and details for so great a master-piece; also the Palace Pitti, at Florence, by Ammanati; the Château de Caprarola, near Rome, by Vignola! and the Picturesque Villa Pia, at Rome, by Pirro Ligorio, all new and beautiful at the time of Inigo Jones's visits to Italy. We do not mention these architects, and their picturesque designs by way of disparagement, for imitate though he might, Inigo Jones was always original; and here lies we conceive, the secret of his power, and of the power of all great architects, both ancient and modern. He imbibed every line of his copy, but loved it far too much to become servile; he copied to revere and admire, not to appropriate by intention, and here lies all the difference between small and great natures. When we see cornices, or windows, or capitals taken wholesale from books, and placed in modern buildings here and elsewhere, we smile at the poverty of the compliment thus unwittingly paid to the original designer; but our architect copied, in quite another fashion, other men's thoughts on passing through the medium of his refined and vigorous intellect, became, by the subtle chemistry of taste, transmuted into forms both new and beautiful. As well as many other buildings of repute, Inigo Jones conceived the original idea of Greenwich Hospital, which was carried out by Webb, his pupil. It was designed at first as a palace, either for King Charles or the queen mother. William III. caused considerable additions to be made to it, in the shape of a replica or pendant, and appropriated the whole to its present uses. We will not stop to criticise this or any other of Inigo's productions too narrowly. We may only say of Greenwich Hospital, in passing, that although bold and vigorous in conception, it appears rather crude and hard in detail, and, after the choice fragment of the banqueting-hall, it is not required to perpetuate the fame of the architect. Kent made a collection of the designs of Inigo Jones in 1727 and 1744, as Ware and Leoni have since done. From these collections, however, it is not easy to discover which were executed works, and which merely ideal conceptions; but they all evince talents of a very high order of mind, and when we consider that it is exactly 220 years since Jones died, we are surprised to find how very suitable to the wants, and acceptable to the taste of the present day, his productions remain. If we compare the well-known front of the Travellers' Club-house, by the late Sir Charles Barry, with the front of the banqueting-hall, these facts will be better understood, for if we take away the portico and bay window from the former building, and the lower tier of columns from the latter, the two fronts become almost identical. Inigo Jones lived through part of the evil days of the English revolution, by which he suffered severely as a Royalist, and for his religious faith. Taking another look at that charming front in Whitehall, appealing to our sense of beauty and proportion as it ever does, are we not reminded once again that true genius lives not for an age, but for all time?

In addition to the buildings we have named, Inigo Jones designed old Surgeons' Hall, the plan of Lincoln's-inn-fields, Coleshill, in Berkshire, Cobham-hall, Kent, Castle Ashley, Stoke Park, Shaftesbury House, and many other buildings in and out of the metropolis. The civil wars embittered his last days, as he could not brook the treatment of the Roundheads, who regarded art as idolatry. It has been said that he was often seen, when past seventy years of age, in the neighbourhood of Whitehall and St. Paul's, gazing sorrowfully at his unfinished works. He had now nothing left to live for. Cromwell's Protectorate was no protectorate of art; so in 1652 the old man went quietly to his rest.

The following verse, applied originally to Jacques Germain Soufflot, the architect of the Church of St. Géneviève, Paris, will apply to Inigo Jones:—

"Pour maître dans son art, il n'eut que la nature:
Il aima qu'au talent on joignit la droiture;
Plus d'un rival jaloux, qui fut son ennemi,
S'il eût connu son cœur eût été son ami."

## PAINTED METALLIC HANGINGS FOR MURAL DECORATION.

AT the Society of Arts lately, Mr. George Clarke brought this subject before a meeting of the members. Mr. Clarke said, the mode of house painting I wish to make known to you is so simple that a short description will explain it. An easy way to bring the nature of it home to the comprehension is to compare it with paper-hangings, the form and application of which are familiar to all.

In justice to our intelligent neighbours across the Channel, I wish to mention that the new art, of which you see the beautiful specimens around you, is a French invention. The first conception of the principle was the idea of a journeyman painter, who saw damp walls, intended to be painted, covered with tinfoil, but he was unable to realise and give a practical form to his crude idea. A gentleman of mechanical genius, who aided the painter, imagined and produced the tools, and invented the *modus operandi*, without which the work and production could not be economically done. An eminent Parisian decorative painter associated himself with the undertaking, and brought his experience to bear on its practical application. Their combined industry, intelligence, and perseverance brought to its present state of perfection the invention, of which a description follows.

Tinfoil in sheets, the thickness of ordinary writing-paper, is the material on which this new style of mural decoration, including gilding, is executed. Tinfoil is pliable and supple, sufficiently tough not to be easily torn, and offers a smooth and uniform surface. It forms an excellent base for the work executed upon it. It also possesses the advantage of being waterproof, a property well known to architects and builders, who frequently use it to cover damp walls, on which without that covering any decorative work would soon perish.

The process of executing the painting on tin offers no difficulty. The sheets are manufactured of a width and in lengths suitable to their application on the surfaces to be covered. At the manufactory in Paris the ordinary widths made use of are from 30 in. to 40 in., and the length 5 mètres, or rather more than five yards.

The following are the processes, as I saw them carried out in Paris at the works of Messrs. Daniel & Co., Rue de Rocroy:—

A portable frame, corresponding in length and width to the dimensions of the painting intended to be produced, is placed on a solid table, made as true and level as a billiard-table. For the perfection of the work, the face of this frame is required to be perfectly level, hard, and smooth. A sheet of glass presenting these advantages in an eminent degree was at first made use of, but as this material is fragile and not safely removable, stiff card-board of the finest texture has been substituted for glass; and, after successive improvements, by using double card-boards of considerable thickness, with stretchers and braces between the two boards, an appropriate frame has been produced well adapted for the requirements of the manufacture, presenting a level, hard, and smooth surface, and conveniently portable. The sheet of tinfoil is carefully laid on and extended over the frame from end to end, and is smoothed down to the surface of the frame with a suitable tool, being secured at both ends to stretch and keep it from shifting. The coating of ground colour, whatever it may be, is laid on the tin sheet with a brush in the ordinary way of painting, so as to cover the metal with a good coat of paint. This process being completed, the frame is removed into a drying-room, where a regular temperature of 80° to 90° Fahr. is maintained by a system of heating, which sends a current of hot air through the room, and speedily dries the coat of paint. For the next process, when the paint is quite dry, the frame is taken out of the drying-room and placed on the table before described. The execution of what may be termed the decorative coat of paint is produced by mechanical means, which may be familiarly described as stencilling and printing by means of sheets of thin copper for the former, and rollers for the latter, much after the manner of staining paper-hangings. The exact nature and the mode of producing these two kinds of tools, which are the most important instruments for the artistic perfection of this new decorative work, I will presently describe; but to give an idea of the celerity and precision with which the process is effected, it may be mentioned that the stencil plate, of the same width as the sheet of tin, is placed over the ground coat, and the painter produces the pattern by painting with the brush over the stencil plate. Or if the roller be used, it is charged with colour, and being passed over the ground coat, produces in like manner the required pattern. Both these tools are sometimes alternately used to produce certain patterns or effects, but, as a rule, the imitations of wood are stencilled, and those of marbles printed. No grainer, however skilful, could attain the same perfection, or do the work in a tythe of the time. The best graining is not an imitation of nature, it is a conventional representation of wood or marble, but could hardly be taken for nature itself. Whereas the imitations are so exact that skilful judges might take them for reality. The frame is now again conveyed to the drying-room, and when sufficiently dry is brought back to the table, and the paint is covered with a coat of varnish; this again being dried as before, the painted sheet of tin is ready for use. If more highly-finished work be required, as in the case of imitations of the finest woods and marbles, a second coat of varnish is laid on, and this, again, after being dried, is brought to the highest state of finish by being polished on the frame. The painted sheets, of any degree of finish, are removed from the frame, and after being dusted with soap-powder, are rolled on cylinders, being now in a merchantable form ready for sale and application with the same facility as paper-hangings. But it is well here to observe that the difference between painted metallic hangings and paper-hangings is, that on the former the decoration is oil-painting, and when applied to any surface is more durable than painting on such surface by the ordinary method, whilst the base or lining being metal, the painted decoration is effectually protected from damp. These advantages make it superior, not only to ordinary painting, but, in a much higher degree, to paper-hangings, which are stained with water-colours of much shorter duration, and subject to the effects of damp both in the walls and externally.

The application of the painted metallic hangings to either wood, stone, plaster, or iron sur-

* To be continued.

faces, offers no difficulty. The operation is somewhat similar to putting up paper-hangings, with this difference, that with the latter the paper is pasted over at the back before being hung, and with the former the surface to be decorated is covered with a thin coat of adhesive varnish, on which, after it has been left to dry partially, the painted tin is affixed with great ease. So little is the difficulty that any skilled paper-hanger can, after a few hours' practice, do the work successfully. From the extreme flexibility of tin-foil, mouldings and cornices are covered with the metallic hangings in the most perfect manner, and with a smoothness of surface and sharpness of outline at the edges and mitres which the painter's brush cannot rival.

These last effects are obtained by covering undulating surfaces with the painted material, of dimensions slightly larger, say ½ in. to ¼ in. in length and width, than the superficial measure. By this contrivance, when the painted tinfoil is affixed on any surface with the varnish, the excess of length or width is cut away along a straight edge with a sharp knife, which leaves the edge of the work clean, and invisible where two edges meet. It is thus that the close joints are obtained in mouldings and mitres as in the specimens exhibited.

The varnish used for fixing the material is of the nature of gold size, but more adhesive. Being of itself "hydrofuge," it adds to the protection of the paint against damp.

## DOINGS IN DUBLIN.

THE opening of the Exhibition on the 5th of this month is looked forward to with interest by many, and an indifference by others. A feeling of dissatisfaction has already found vent through the pages of more than one journal in consequence of some unfavourable arrangements as to space allotted to native exhibitors, and particularly affecting the coach and carriage builders of Dublin. Fault is also found with the general manager and committee for giving or allowing most of the preparatory work of statuary, painting, decoration, and fittings to pass into the hands of London houses, without giving any chance to the Dublin firms by a competition, limited or otherwise. A grievance in Dublin is certain to win support, particularly when it is of the nature alluded to.

The exhibits of various kinds are still arriving, and it is not unlikely that as many objects will have to be admitted after the opening, to compensate for the rather tardy response that signalised the intending and half-hearted contributors in the beginning of the season. Sir Arthur Guinness, one of the promoters, contributes a good collection of china; and Earl Spencer's collection of similar ware is expected to be arranged before the end of this month. The loan collection from South Kensington has arrived, containing specimens of ancient china and gilt copper vessels. The Royal portraits are placed in position, as also are a number of the old masters.

The decorations are all but completed within, and the pleasure-grounds and gardens without are undergoing still farther improvement.

There is one matter which will constitute a great drawback on the first and succeeding days after the opening,—the want of a catalogue. We are told gravely that it will be impossible to have the catalogue in readiness, from the number of items to be enumerated. There seems to be no valid excuse for its delay, and it is little less than bungling, or bad management, to open the Exhibition without having a printed catalogue to place in the hands of the visitors and exhibitors. There should be one, however incomplete it might be, and even though it necessitated a second edition, or an appendix.

The Corporation has allotted a site in Foster-place, College Green, for an intended statue to the late Field Marshal Lord Gough. We may expect to hear of its erection in another ten years. O'Connell has been dead exactly a quarter of a century, this month. Subscriptions were raised immediately after his death. Ten years ago a site was allotted, and Mr. Foley, the sculptor, was commissioned to execute the statue. Well, it is but a little more than half finished, and it is now announced that it will be completed in three years more. The year 1875, when this statue of the "liberator" it is supposed will be finished, will be the centenary of O'Connell's birth.

The Convalescent Home, the want of which is so severely felt, and which resulted in an indignation-sympathy meeting, some two or more months ago, is not yet commenced. The Corporation are in no hurry.

The Sanitary Works (Ireland) Bill is an attempt to exempt the Corporation of Dublin from paying rates for the water-mains. The Bill is in reality no sanitary measure at all, and it professes to deal with matters which had better be left alone than treated in the manner they are. We cannot see how the ratepayers will be benefited; and if the Bill were passed, the exemption claimed by the Corporation would only embolden that body to pursue a more ruinous and extravagant scheme of taxation as soon as they were relieved. Every attempt made by the Corporation of Dublin during the last decade professedly to relieve or lighten the taxation of Dublin is said to have resulted in increasing the rates. The city is at present sinking under a taxation of nearly 10s. in the pound.

## OPENING OF THE FINE ARTS EXHIBITION, IN NOTTINGHAM.

THE Midland Counties Fine Arts and Industrial Exhibition, in connexion with the South Kensington Exhibition, has been formally opened by the mayor, at the Exchange Hall, Nottingham. Since the preliminary opening, when the mayor gave three *conversazioni*, the display has undergone some modification, many things having been added and others removed. The ante-rooms, which were set off for the purpose of enhancing the appearance of the building to give festive effect, have undergone an entire change. The floral and drapery embellishments have given way to objects of interest in the museum, so that what is lost in ornamentation is compensated for in sterling worth. Mr. Cole, and Mr. Wallis, of the South Kensington Museum and most of the members of the corporation, as well as many of the principal gentlemen of the town, met in the mayor's parlour, and walked in procession with the mayor to the Exhibition.

After the mayor's address, Mr. Cole said they in Nottingham had a school of Art at the head of all other art-schools in the country; and it had seemed to him that they were bound to have a permanent museum. They had now got it, and he heartily congratulated them on having done so. He declared he never saw anything equally successful. It was altogether a striking collection, and he was glad to see that those who had taken an interest in it had acted in such a catholic and admirable spirit. He had seen the museum at Lyons, and, in the way of lace, they had made in Nottingham as good a beginning in their own way as Lyons, with its hundred years' experience. It was true that South Kensington was becoming the storehouse of the country, and there were other public institutions which he hoped might also become storehouses. He trusted that the National Gallery would furnish an institution like that, with a great many of its superfluous pictures, and that the British Museum would send objects of art and science, for they were smothered with things that could not be seen. But it was all very well to bring these objects to the town, they must find a building to hold them. They had found a most excellent one, and, although it was small, it would lead to a much larger one whilst they had the guardianship of the chamber.

## PICTURES BOUGHT BY THE ART-UNION OF LONDON.

THE following are the principal works already selected by prizeholders:—

*From the Royal Academy.*—Repairing the Old Boat—South Coast, J. W. Oakes, 262*l.* 10s.; A Love Spell, Fredk. Chester, 200*l.*; Through the Coverts of the Deer, W. Luker, 150*l.*; A Peep of Ben Venue, N. E. Green, 45*l.*; Caught in a Squall, W. J. Rolfe, 45*l.*; The Spindle Rock, D. Cameron, 45*l.*; An Autumn Afternoon, W. Luker, 40*l.*; A Summer Morning—Ullswater, A. Powell, 40*l.*; A Sunny Walk in Knowle Park, Sevenoaks, J. W. B. Knight, 35*l.*; A Stormy Day, J. B. Smith, 35*l.*; On the River Tamar, Cornwall, A. B. Collier, 31*l.* 10s.; An English Brook, J. Adam, 30*l.*; The Pet Lamb, J. Henzell, 30*l.*; The Path through the Wood, Cobham, Kent, M. E. Dockree, 25*l.*; Moonlight on the Adur—Lancing College, R. H. Nibbs, 25*l.*; The Swale, near Richmond, Yorkshire, C. Smith, 25*l.*

*From the Society of British Artists.*—Mill on the Lowther, Cumberland, Jas. Peel, 100*l.*; the Secret Despatch, J. Gow, 75*l.*; A Summer's Morning—Early Sunrise, T. F. Wainewright, 73*l.* 10s.; Into Port—French Coast, J. J. Wilson, 60*l.*; Lulworth Cove, J. Danby, 45*l.*; The Gleaner, E. J. Cobbett, 42*l.*; A Passing Glance, A. Glasgow, 40*l.*; Hard at Work, G. A. Holmes, 40*l.*; Fisher Children—Sussex Coast, W. Hemsley, 35*l.*; A Country Lane in Hampshire, W. H Hopkins, 35*l.*; Snowdon from Llyn-y-cwm, S. R. Percy, 35*l.*; Market Day—Winter, G. A. Williams, 35*l.*; A Summer Shower, T. F. Wainewright, 31*l.* 10s.; Fruit and Bird's Nest, C. T. Bale, 30*l.*; An American Autumn; J. C. Thom, 30*l.*; Lyn Peris, Llanberris, North Wales, J. J. Curnock, 25*l.*; Patchwork, R. C. Green, 25*l.*; View on the Llugwy, Bettws-y-coed, North Wales, E. H. Holder, 25*l.*; A Spanish Lady, J. C. Waite, 25*l.*; "Turf" on the Exe — Entrance to Exeter Canal, J. H. Dell, 20*l.*; Mill at the Head of the Creek, near Gerran, Cornwall, W. Pitt, 20*l.*

*From the New British Institution.*—Kilchurn Castle, T. O. Hume, 25*l.*; Great Expectations, H. H. Couldery, 21*l.*; A Flower of Seville, T. K. Pelham, 20*l.*

*From the Society of Painters in Water Colours.* Green Hill, Borrowdale, Cumberland, P. J. Naftel, 40*l.*; A Mountain Stream—Morning North Wales, C. Branwhite, 35*l.*; Farmyard, Serk, Paul J. Naftel, 30*l.*; Canale del Fonteco, Venice, W. Callow, 26*l.* 5s.

*From the Institute of Painters in Water Colours.*—Summer Afternoon—Low-tide, F. J. Skill, 42*l.*

*From the General Exhibition of Water Colour Drawings.*—Play-time, Edwin Bale, 25*l.*

## SCHOOL BOARDS.

*London School Board Competition.*—With reference to the competitive designs received for seven additional schools, Mr. W. G. Coldwell has been appointed architect to carry out the Battersea-road schools; Mr. Joseph Gale, to carry out his plans for Kender-street, Hatcham, schools; and Mr. Lacy W. Ridge, to carry out his plans for the Mary-street, Bromley, schools.

*Worcester.*—The clerk read the minutes of the meeting of the Sites and Building Committee, held on the 13th instant, for the purpose of opening the tenders for the new school buildings, from which it appeared that a resolution was carried to the effect that the tender of Messrs. Wood and Sons, at 4,987*l.*, less 50*l.* for materials, be adopted. The following tenders were received:—

| | | Old Materials. | Net. |
|---|---|---|---|
| S. Clerk, Bath | £5,069 | £75 | £4,994 |
| E. Taylor, Worcester | 5,090 | 118 | 4,972 |
| Brown & Davies, ditto | 5,365 | 100 | 5,265 |
| Wood & Sons, ditto | 4,987 | 50 | 4,937 |
| J. Everal, Malvern | 5,105 | 100 | 4,995 |
| Thos. Dixon, Worcester | 6,367 | 100 | 6,267 |
| T. Hartley, Birmingham | 5,500 | 100 | 5,400 |
| T. S. Morland, Gloucester | 5,687 | 75 | 5,612 |

The vice-chairman thought it necessary to state that the cost of these schools was somewhat greater than they had anticipated. In the first place, the short-hours movement and the advance of wages had contributed to this circumstance, and there was very little doubt that the difficulties subsisting between employers and their workpeople had prevented many of them from sending tenders. The clerk laid on the table the filled-in form required to be forwarded to the Education Department, containing exhaustive particulars respecting the accommodation of the new schools, together with the expenditure to be incurred by their erection, from which we make the following extract:—

| | | |
|---|---|---|
| Cost of site | £1,795 | |
| Legal costs and expenses of conveyance | 175 | |
| | | £1,970 |
| Cost of building, including boundary-wall, outbuildings, and internal fittings, from the tender it is proposed to accept | | 4,937 |
| Architect's commission, and other expenses of superintendence | | 382 |
| | | £7,289 |

It was explained that the original estimate did not include matters which have been recognised in the latter sum.

*Southampton.*—The Works and General Purposes Committee's Report stated that the plans of the architect (Mr. Howell), in respect to the Bevois Town schools were agreed to, and it was resolved to bring them before the Board for approval. The report was adopted, and the plans ordered to be proceeded with.

*Derby.*—A letter received from the Education Department was read, approving of the plans of

the Gerard-street schools, and recommending the Public Loan Commissioners to lend to the School Board a sum not exceeding 4,500*l.*, the repayment of the sum to extend over fifty years. The letter was received, and it was resolved to instruct Mr. Bridgart, architect, to commence operations immediately.

*Wolverhampton.*—The first business of any importance was with reference to the proposed erection of new Board Schools on the Dudley-road, and after a short conversation it was decided to forward the plans and specifications, as prepared by Mr. Bidlake, to the Government Educational Department for approval, and with a view to save time it was also decided to at once advertise for tenders for the erection of the schools.

*Scarbro'.*—Plans were submitted by the following architects for the schools to be erected at Falsgrave,—Messrs. Stewart & Bury, Scarbro'; Messrs. Smith & Brodrick, Hull; Messrs. Alley & Wilson, Manchester; Mr. Wm. Watson, Wakefield and Doncaster; Mr. David Oldfield, London; and Mr. E. Egan, Loughton, Essex. The consideration of the plans was deferred, and it was ordered that in the meantime they be laid in the board-room for inspection.

*Driffield.*—The Board examined and considered the school plans as further altered and modified by Mr. Paul, the architect, to meet the views of the board. In the letter accompanying the plans, sections, and perspective, Mr. Paul stated that the arrangements were now simple and good, and as the Board required a plain type of building, he hoped the plans would now be approved of. It was arranged to have a meeting with Mr. Paul before sending the plans to the Educational Department for approval.

*Ipswich.*—The clerk read to the Board the minutes of last meeting, the latter part of which was held in committee in order to discuss the plans sent in by the competing architects. It appeared that the plan of Mr. Butterworth for a school on the Wherstead-road site was provisionally accepted by the Board; a committee was appointed with reference to the matter. The clerk was instructed to write to Mr. Butterworth, informing him that his plans were accepted on the understanding that the building would be constructed in a sound and satisfactory manner for the sum he had estimated (2,500*l.*), and that such alterations as the Board might require might be made without the cost being exceeded. The plans of Mr. H. M. Eyton for schools on the Argyll Estate site were accepted on similar conditions, and a committee appointed. Mr. Eyton's estimate is 1,875*l.*

## THE OPENING OF THE GREAT EASTERN EXTENSION RAILWAY TO STOKE NEWINGTON.

THE opening of that portion of the Great Eastern Company's City Extension line between Bethnal-green and Stoke Newington, which took place on Monday last, brings into active use no less than six new stations lying between these two points. These stations are respectively Bethnal-green Junction, Cambridge Heath, London Fields, Hackney Downs, Rectory-road, and Stoke Newington. Some of these stations, more especially Cambridge Heath, Hackney Downs, and Stoke Newington, are large and handsome structures. The trains will for the present run from the Bishopsgate Station to the Bethnal-green Junction, but ultimately the extension line will run to the intended new station in Liverpool-street, altogether avoiding the Bishopsgate-street Station, which it is said is to be converted into a goods station. We understand that the remainder of the extensions north of Bethnal-green, making in all about nine miles in length, will be opened in about a fortnight or three weeks.

## INAUGURATION OF STATUE AND BATHS AT BARROW-IN-FURNESS.

A BRONZE statue, by Noble, of Mr. Ramsden, mayor of Barrow-in-Furness, has been unveiled in Ramsden-square, in that town, by the Duke of Devonshire, amid great rejoicings. Baths, erected at a cost of 2,000*l.*, were on the occasion presented to the town by Mr. Ramsden, and a banquet was held in the Town-hall, under the presidency of the duke, supported by the Bishop of Carlisle, Lord Frederick Cavendish, M.P., Mr. F. S. Powell, M.P., Mr. Childers, M.P., &c. A portrait of Mr. Ramsden, by Mr. Knight, R.A., is to be hung in the hall. Mr. Ramsden, it is said, will shortly be knighted.

The first course of the pedestal of the statue is of grey granite, dressed, and is 10 ft. square by 2 ft. 5 in. thick; the second course, of similar stone, polished, is 7 ft. square by 1 ft. 10 in. thick; and the third course, weighing about 8 tons, being the heaviest stone in the pedestal, is of red Peterhead granite, and is 5 ft. 6 in. square by 3 ft. thick. The die is also of red granite, and is 4 ft. 10 in. square by 3 ft. 11 in. thick; and the capital, of a similar description of stone, is 6 ft. 2 in. square by 2 ft. 10 in. thick. The total height of the pedestal is thus 14 ft. The first course of the red Peterhead granite and the die are of an irregular octagon shape, and the cornice is moulded with a "blank and space" ornamentation. The total weight of this basis for the statue is about 50 tons. In the centre of the second course of the pedestal a bottle was deposited, containing the current coins of the realm, a printed statement of the reasons which induced the inhabitants of Barrow to erect the statue, &c.

The statue has been executed in bronze. It has been placed on the pedestal facing the west,—the docks,—and represents the mayor in his municipal robes and other corporate insignia. It is said to be a good likeness. To the right of the figure is a small pedestal, depending from which is a *fac simile* of the Charter of Incorporation, of date 1867.

A statuette, in white marble, a *fac simile* of the bronze statue just unveiled, also the work of Mr. Noble, is to be presented to Mrs. Ramsden.

## THE MID-LONDON RAILWAY PROJECT AND THE LONDON AND NORTH WESTERN COMPANY.

IT is confidently stated that the directors of the London and North Western Railway Company have resolved to use their influence in support of a motion which is about to be made for a recommittal of the Eastern Section Bill of the Mid-London Railway, being that portion of the project from the Marble Arch to Whitechapel, and against which the committee over which Mr. Hardcastle presides decided on the ground that no satisfactory proof had been given that the large capital required for carrying out the scheme would ever be practically available.

## ECCLESIASTICAL DILAPIDATIONS ACT, 1871.

IT was thought by some of the diocesan surveyors that it was very desirable to have a meeting, in London, of all the surveyors appointed under this Act, for the purpose of discussing the Act, and promoting uniformity of practice, and for discussing fees, and so on. A preliminary meeting was accordingly held on the 20th of May, at which were present the diocesan surveyors for Canterbury, the diocesan surveyor for Winchester, the diocesan surveyor for Oxon, the diocesan surveyor for Chichester, and the diocesan surveyor for Ripon; and it was determined to hold a meeting of diocesan surveyors at the Rooms of the Royal Institute of British Architects, on Tuesday, the 11th of June, with the view of forming an association of diocesan surveyors, and discussing the working of the Ecclesiastical Dilapidations Act.

## DESTRUCTIVE EFFECTS OF LIGHTNING.

THE parish church of St. Mary, Beeston, Norfolk, has been set on fire by lightning, and destroyed. It was a specimen of fourteenth-century work, and contained carved and painted screens of that date.

The spire of St. Martin's Church, Birmingham, has been struck, but not very much injured. The flashes were painfully vivid, and the peals appalling. A man, while passing along New-street, was struck, and rendered speechless. Another man has been killed while going home from work: he was twice struck. In Great Russell-street another was knocked down by the lightning. Six men engaged in drainage-work at Frodingham, near Beverley, were struck by lightning on another occasion. One was killed, and the others were seriously injured.

Loss of life and injuries by lightning have been unusually frequent of late in various parts of the country. An old man was killed in a field near Guildford. At Thetford four sheep and five lambs were killed while taking shelter from a storm; and at Suckley a ewe and a lamb were killed under similar circumstances. A barn has been burnt by lightning at Ufford.

The extent and frequency of fires last year and this may have had something to do with the active or ozonic state of the oxygen of the atmosphere during the prevalent physical commotions. Ozone is believed to be just electrified oxygen.

Two hundred houses in the Russian town of Witepsk have been destroyed by a fire which lasted three hours. This town, of above 25,000 inhabitants, had only three fire-engines. By a great fire in Yedo, Japan, on the 3rd of April, 50,000 persons have been rendered homeless, and 250 to 300 have perished. Four square miles of the city (a very wooden one) and 10,000 houses have been devastated. In Scotland there have been destructive fires on a small scale. Explosions, sometimes unaccountable in their causes, have in this country also been occurring.

## THE WORKS ON THE CHELSEA EMBANKMENT.

MR. WEBSTER, the contractor for the Chelsea Embankment, is pushing the works forward with much activity, and during the past few weeks considerable progress has been made, and sufficient has already been done to indicate what a great improvement it will be when completed. At the Old Brewery and at the Chelsea Hospital end the Embankment is almost finished, and the ornamental coping has already made its appearance in several places. Proceeding along the staging the facing of the embankment is seen just peeping above the water, with the rear filled up with concrete. A little beyond the brewery are the stores, where the granite, the concrete, and the other materials are kept; and here the large blocks of concrete which serve as the foundation are made. The existing embankment, near the Chelsea Bridge, will look small and unpretending by the side of the one now in course of construction.

## THE TRADES MOVEMENT.

*London.*—The Builders' Society had a meeting on Thursday, in last week, at which the questions raised as to the "nine-hours movement" were discussed, and it was resolved to meet a deputation of the carpenters and joiners, at their request. The impression was that the state of trade does not warrant any advance of wages, but the employers were prepared to discuss the question in any form the workmen may desire. The feeling of the meeting was that if, pending these negotiations, any of the members should be struck against, the other members would do everything to support any one so attacked, even if it went so far as to involve a general lock-out, which, of course, they were most anxious to avoid.——The adjourned general meeting of delegates from the London Carpenters and Joiners was held on Saturday night last, in Bloomsbury; Mr. Sadler, the president of the nine-hours committee, in the chair. There was a crowded attendance, many delegates attending for the first time with the adhesion of their constituents to the movement. The chairman said the immediate object of the meeting was to receive the reports from the firms of Jackson & Shaw, and Brass's, with the result of interviews held with these firms by their workmen, conveying to them the information that, in accordance with a resolution of the delegate meeting, the men would leave their employ on Saturday next, unless they in the mean time conceded the terms claimed by the men in the memorial, and endorsed by the aggregate meeting of the trade held in St. James's Hall. The delegate from Jackson & Shaw's firm then stated that Mr. Jackson said he considered the demands of the men were unconscionable, but declined to enter into any discussion upon the subject, inasmuch as the Masters' Association, of which the firm were members, had appointed a committee to meet a deputation from the men to consider the whole question. The whole of the men in the firm, both those working in the shop and at the out-door jobs, were prepared to leave work on Saturday next, if it should become necessary. The delegate from Brass's firm made the same statement. Mr. Brass informed his men that he was appointed one of the committee of masters who were to meet the men's deputation. Mr. Matkin, the secretary, in reply to a question, stated that the number of men (carpenters and

joiners) who would cease work at the above two firms on Saturday next was about 300. After some discussion a deputation of seven delegates, with the chairman and secretary of the committee, were appointed to meet the masters' committee, if officially requested to do so. Another discussion ensued upon the instructions to be given to the deputation, and it was finally resolved "That the deputation have no power to refuse or accept any proposals made by the masters' committee, but to report the result of their interview to a special delegate meeting for its consideration."

*Ipswich.*—The Workmen's League have appointed Mr. A. A. Watts and Mr. F. J. Bugg to act as arbitrators on behalf of the League, and these gentlemen have consented to act. The men on strike have declined to return to their work in the mean time.

*Sheffield.*—Two hundred stonemasons have struck work at Sheffield, in consequence of their masters deciding not to reduce their working hours to fifty per week. They have been gradually obtaining employment, however, on their own terms.

*Preston.*—A meeting of the master carpenters of Preston has just been held, to consider the application of the men for shorter hours. After a short discussion it was resolved to reduce the working hours five hours a week.

*Hawick.*—Several of the journeymen masons in Hawick have struck work, in consequence of the refusal of the masters to concede the nine-hours limit. The strike, however, is not universal, and some of the masters retain nearly their whole complement of hands. Those who have struck are mostly young men, and many have left the town to seek work where the nine-hours system is in operation.

*Cupar-Fife.*—Most of the builders in Cupar-Fife and neighbourhood have now complied with the demand of their workmen for an advance of wages from 5d. to 5½d. per hour. With the exception of a few who had left the town, all the men employed when the demand was made are now re-engaged. The building trade in the district is at present in a very dull condition, and owing to the rise of wages and materials, a number of buildings intended to be erected this summer are to be delayed till another season.

*Dundee.*—A meeting, attended by delegates from Forfar, Arbroath, and other neighbouring towns, has been held at Dundee, at which it was reported that the nine-hours movement in Edinburgh, Glasgow, and throughout Scotland generally, was being carried on energetically, and that the petition in favour of Mr. Mundella's Bill had been very largely signed.

*Glasgow.*—A crowded meeting of operative masons of Glasgow and neighbourhood has been held in the Trades' Hall, Mr. Robertson in the chair. On the motion of Mr. D. Ferguson, seconded by Mr. A. Duncan, it was resolved that the unprecedented rise in the price of the necessaries of life, as well as in that of tools, since the last advance of wages was obtained, justified the request lately made to the employers for an advance from 6½d. to 7d. per hour. The meeting, on the motion of Mr. A. Boa, seconded by Mr. A. Easton, pledged themselves to use every legitimate means to obtain the introduction of weekly pays. The representative committee was empowered to carry out these resolutions.

*America.*—A telegram from Washington states, the strikes in favour of the eight-hours movement continue, and the trades are generally joining the Eight Hours League. The master masons, the carpenters, and the bricklayers have already acceded to the demands of the men.

## THE CITY GUILDS.

I believe that many of your readers have read with much pleasure the articles in which from time to time you have noticed the "City Guilds." I for one have hoped that you would see your way to an expository statement, in a condensed form, of the purposes, sources of income, administration, and actual working result of the building guilds, and of one or two others that may be deemed fair samples of the rest.

The existence of these wealthy corporations, with considerable land and house property well held in hand and improved (in rentals), is probably mainly known by their fine large halls of meeting, by their vigorous insistance on the rights of ownership, and by their "magnificent banquets," and the "presentation of freedoms of the company in handsome caskets of choice design and workmanship;" "of fine gold executed in the short space of a fortnight, and reflecting the highest credit on the producers, Messrs. ——," &c. Members, and occasional visitors, in no Quixotic mood, chuckle with very natural satisfaction over these banquets, though some are stirred by a little innocent amazement at times when distinguished statesmen, and brave warriors, and royal and semi-royal personages, are among the receivers of mysterious documents; and the takers of bold "pledges to observe all the rights and mysteries of the company." Mr. Gladstone, it is true, hoped that his sense of duty would never require him to do anything that might not be usual in a respectable—shoemaker, let us say. Perhaps the state of parties, and of political life generally, may not allow it to-day or to-morrow, but surely sooner or later an inquiry must be ordered as to the functions and resources of the fully-owning trustees of the private public corporations, who have long been in frame of mind to cheerfully endorse the recent becoming language of the Duke of Cambridge at "a banquet," respecting "the maintenance of institutions which have made us what we are, and that will keep us what we are if we are only true to ourselves."

How can the withholding of the fullest information from the public be justified? In the case of "insurance offices, banking corporations, and other business companies,"—cited by a correspondent in the last number of the *Builder*,—the same secrecy is not observed. I need only mention "The Life Assurance Companies Act, 1870." A more strictly parallel case would seem to exist in the pending inquiry as to the administration, revenues, &c., of the ancient universities,—against which hardly a voice has been raised, so thoroughly is the necessity of investigation recognised in these (wisely) "suspicious and searching days:" when investigation is not made for insult, for idle curiosity, nor even for the sake of gibbeting misdeeds in the past,—but in order that the accurate information may be accumulated on which alone legislative action or inaction can safely rest. Mr. E. Nash's judicious communication before alluded to defends the action of many of the companies, but omits any remark as to the necessity and duty of publicity; and one hopes that a slip of the pen only is responsible for the sentence:—"Individuals are allowed to give expensive dinners, &c., . . . if they do it with their own money,"—the conclusion pointed at apparently being that corporations also can "do what they like with their own." It would open, entirely unnecessarily, a tremendous question to state what looks like good reason for wishing little legal interference with private ownership; notwithstanding that, according to the best teachers, the riches of each man are *in foro conscientiæ* to be considered as held in trust for the less trustworthy and self-helpful brethren of human kind. But a corporation, taking to solid property in right of fulfilment of some special duties at one time of much moment, holds in the view of most of us,—not only this sort of trusteeship, but also one more tangible and formal, that is properly liable to criticism and to severe scrutiny: if not perfectly within the reach of this, by form and rule of law, they should be vigorously and speedily made so. But who, except a privileged and well-informed member, could take any action now? It is true one remembers the unutterable drollery of the law-suit, gravely maintained in our courts some years ago, against a livery company for damages for deprivation of valuable dinners,—and its lame conclusion. It is not often, however, that the bonds of amity are broken in these leagues.

The last sentence of Mr. Nash's letter also deserves a remark;—"reform where reform is needed is desirable, but change where change is not needed is revolution." Let us not habitually make an outcast of a word that may yet have chances to redeem itself from all its bitter taints. It becomes us least of all, in a country where, as we proudly boast, our *revolutions* are made peaceably by even process of law. May I, too, imitate the language of copybooks and moral primers, saying, — changes wisely planned and thoroughly carried out are, in important matters, properly deemed the best kind of revolutions. Revolutions are of all sorts.

But, perhaps, this after all, may be called mere word-fencing. The immediate point is that certain corporate bodies, said by some to be well governed, are by others subjected to (let us say) unworthy suspicion. In order to assist these bodies in their own justification, the well meaning, ignorant outsiders call for public statements or for complete inquiry. Those who confess they do not understand thoroughly the institutions of which they are talking,—who see behind the curtain the movements of mysterious shadows, accompanied by the jingling of equally mysterious money,—will at the conclusion of such inquiry, render back the old, and give fresh honour if need be. Or they may have to ask that, what were candidly termed by a distinguished person a few days ago, "the [illegible] old institutions, the importance of which [illegible] their actual uses, to some extent, have [illegible] away," shall be treated to reconstruction [illegible] definite objects and schemes for attaining th[illegible] Or it may be necessary that their existence sh[illegible] be wholly terminated, and that the funds [illegible] centuries gathering in these reservoirs, may [illegible] led in fertilising streams, where the presen[illegible] generations of Englishmen may obtain the needed material for better nurture in those use[illegible]ful arts which so firmly maintain the habits [illegible] civilised life, which, eventually, if not [illegible] matters of mere mechanical routine, may [illegible] almost invariably the sources of pure u[illegible] pleasure to all who engage in them.

## THE RIVER ALT DRAINAGE.

In consequence of the recent repeated floodings of the low lands drained by the Alt, the River Alt Commissioners engaged Messrs. Reade & Goodison, civil engineers, of Liverpool, to report upon the condition of the drainage under their jurisdiction.

The result of the survey is embodied in a report just printed, which states that the general condition of the drainage is most unsatisfactory, and that the bed of the river is from 2 ft. 6 in. to 3 ft. 6 in. higher than it should be, along a considerable portion of its length. As a large tract of low-lying land between Liverpool and Southport is dependent upon the efficiency of the river, the consequence of this silting up of its bed is serious.

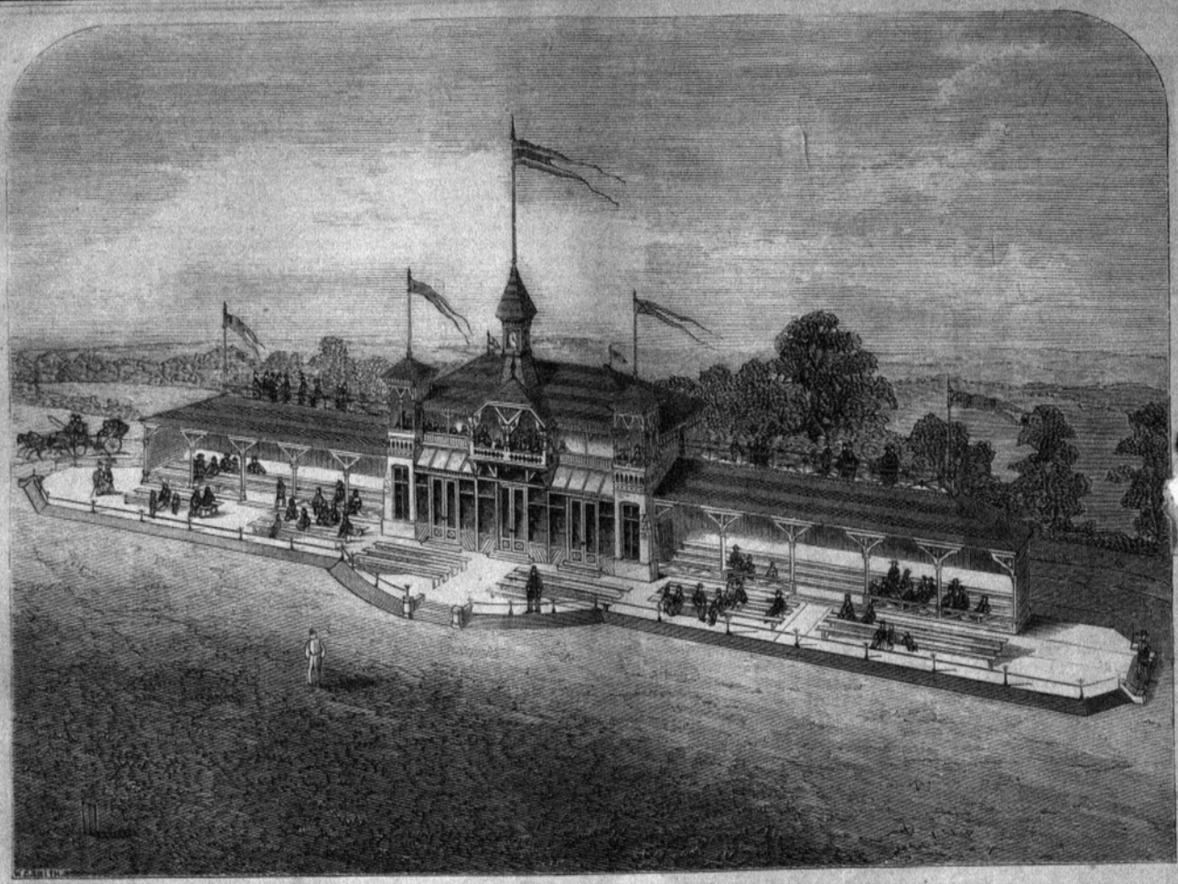
The course of the river being much affected by the north-west wind and sand-drift, the engineers think that special means will have to be taken to guide the river into a shorter channel, and afterwards preserve it from working back into its old course. They suggest, in the formation of the new channel, that the south bank should be protected with sheet piling for a considerable distance on the foreshore.

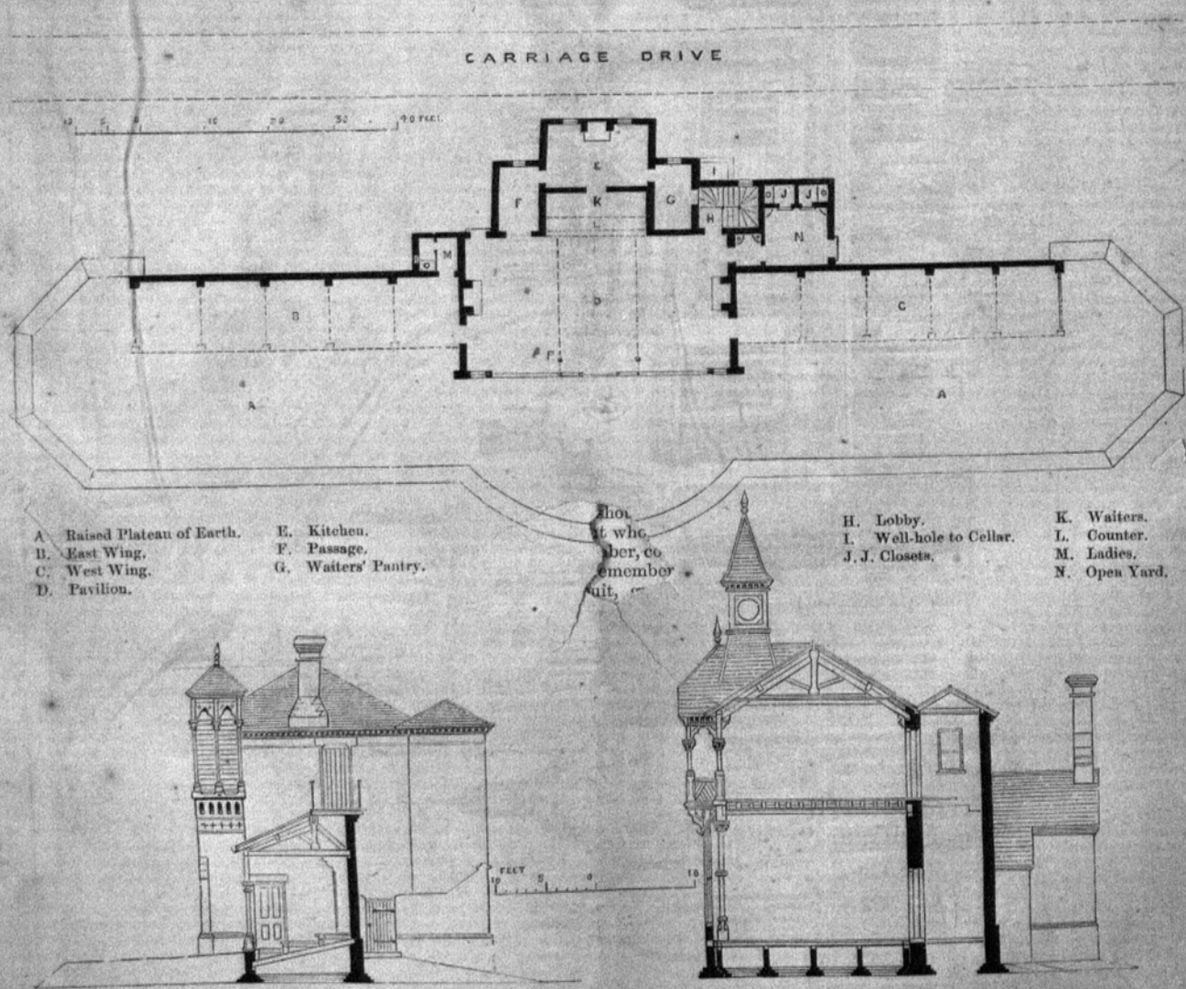
In connexion with this alteration, they also propose to make a new cut from the flood-gates to the Alt Bridge, by which the present objectionable range of sand-dunes along the river, dividing it from the Altcar Rifle Range, will be avoided, as well as the course of the river shortened inland about 6,000 ft. Machinery for holding back the water above the flood-gates, and using the power thus stored for flushing out the foreshore channel at low water, is also considered absolutely necessary.

## THE PROPOSED NEW PAVILION AT THE TRENT BRIDGE CRICKET-GROUND, NOTTINGHAM.

This building, intended to be erected from the design of Mr. S. Dutton Walker, F.S.A., will render the Trent Bridge Cricket-ground very attractive, and will be a great convenience to the subscribers and their friends. The central feature in the design is the Pavilion, two stories in height, the ground-floor being arranged for the purposes of dining and refreshment generally. The upper apartment will form a balcony, from which a very excellent view of the whole cricket-field will be obtained. The covered wings on either side of the pavilion will be used when a match is being played, and will serve as excellent shelter from cold winds or rain. It is proposed to devote one wing to ladies. The seats in the wings are raised one above another as galleries. The front seats may be removable if required. In the rear will be kitchen, and cricketers' dressing-rooms. A fine view of the cricket-field will also be obtained from the open-air galleries over the roofs of side wings, the floor of which will be on a level with the floor of the balcony.

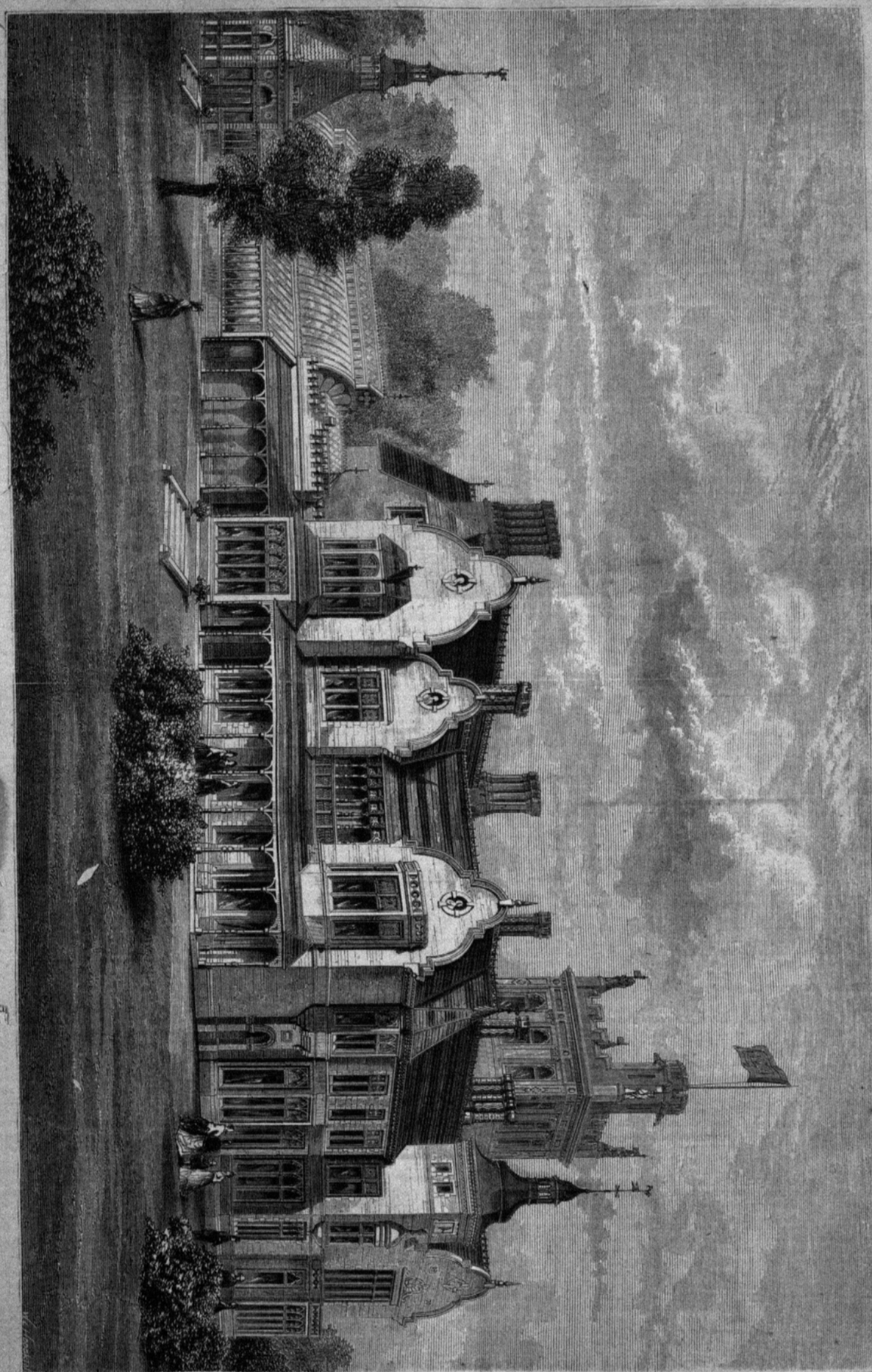
**Society of Engineers.**—Mr. G. W. Harris having resigned the secretaryship of the Society of Engineers, Mr. Perry F. Nursey, C.E., has been appointed to the vacant post.






PROPOSED PAVILION AT THE TRENT BRIDGE CRICKET-GROUND, NOTTINGHAM.

Mr. S. Dutton Walker, Architect.



CAEN WOOD TOWERS, HIGHGATE.—MESSRS. SLIGGINS & JONES, ARCHITECTS.

## CAEN WOOD TOWERS, HIGHGATE.

CAEN WOOD TOWERS, erected at Highgate on the site of Fitzroy Farm and Dufferin Lodge, is the seat of Mr. Edward Brooke, nominated by the Lord Mayor to fill the office of sheriff of London at the next election. The plan of the house and a view of another front were published in the *Builder* of June, 1870. The building is faced with red Loughborough bricks, with sunk joints in black mortar, and dressings of Doulting stone. The chimney-shafts are of ornamental bricks of various patterns, from old examples moulded by Mr. Gunton, of Cossey, near Norwich. The roofs are covered with ornamental tiles in various patterns, and laid in bands. All the internal woodwork on the ground-floor is wainscot, and on the bed-room floor pitch pine. The doors and dado of halls and staircase have carved moulded panels on the solid. The floors are of parquetry. The ante-hall is laid with black and white marble. In the ante and inner hall are richly-carved chimney-pieces, executed by Mr. J. B. Philip from designs by the architects, with varied coloured polished marble shafts and dog-grates. The ceilings of dining-room, halls, morning-room, and library are of panelled wainscot, moulded and carved, with an elaborately-carved chimney-piece in the dining-room, also of wainscot, working up into the ceiling. On either side of the dining-room chimney-piece are windows looking into a fernery, with fountains. The upper portion of windows above the transome is fitted with stained glass geometrical pattern. The staircase is of wainscot, carved with standards for gas on the newels, supplied by Mr. Verity, of Covent Garden. The staircase windows are filled with stained glass; the large one with the armorial bearings of the Brooke family for eighteen generations; the side lights, with subjects from Tennyson's poems.

The billiard-room windows are also fitted with [illegible]ed glass, indicating different sports, such [illegible]ting, fishing, coursing, shooting, croquet, [illegible]y, and so on. In the inner hall and upper [illegible]g leading to bed-rooms the windows are [illegible] with stained glass, with subjects from well-[illegible]n fables. All the stained glass has been [illegible]plied by Messrs. Heaton, Butler, & Bayne.

The morning-room is lined with old Cordova [illegible]ther, brought from Antwerp, and which was [illegible]t up in a mansion there when Antwerp was under Spanish rule: it is in a fine state of [illegible]servation. The ceiling of this room is [illegible]rated to agree with the leather; the [illegible] portions of the windows being fitted [illegible] stained glass, with designs of the seasons; the frieze of the cornice having heads modelled by Mr. J. B. Philip from Scriptural subject[illegible]. Off the dining-room is a picture-gallery leading into a conservatory, 80 ft. long, in i[illegible]nwork. At the end of the conservatory is a pa[illegible]ilion with decorated roof, covered with ornamental pattern zinc, 50 ft. high to the vane,—the vane, a Mercury, in zinc. The floors of the conservatory, pavilion, and verandah are laid wit[illegible] ornamental tiles by Simpson & Sons, of the Strand. The drawing-room ceiling is panelled work, and decorated by Mr. Pollit, of Manchester. The furniture throughout the house is made to agree with the architecture of the several rooms; [illegible]ining-room of pollard oak, the drawing-ro[illegible] of ebony and ivory, the morning-room of walnut.

The whole of the work, including the furniture supplied by Mr. Lamb, of Manchester, has been carried out from the designs and under the superintendence of Messrs. E. Salomons & J. P. Jones, architects; Messrs. Jackson & Shaw were the builders; and Mr. George Simmonds was the [illegible]rk of works.

## AUCTIONS AND AUCTIONEERS.

SIR,—In reply to the statement that auctioneers' and estate agents' charges generally are ridiculously high in comparison with the knowledge or skill required, I would say, since houses have multiplied to such an extent, and are generally of such an inferior stamp to what they used to be when I first knew the business, it requires twice the skill to induce a man to trust his wife and family within some of them, and much more to induce him to pay the rents demanded and adhere to the surrendering clauses of present style of leases. It would be a capital thing if commissions were done away with altogether, and we were obliged to take out a licence at 25*l.* to enable us to practise, and then that we be permitted to charge for letters, attendances, and some other portions of our business after the same scale as solicitors. All sales could be agreed for at a set sum, and I am sure our profession would not grumble, while your friend would have gained his point, and at the same time have given a deal of satisfaction to a very respectable class of the community. The *Builder* did not say whether architects get any pickings beyond the 5 per cent. mentioned. Do they put in ornamental work in plans that they know must be obtained in certain quarters? And what arrangements are previously made in those quarters? Perhaps it would be as well to inquire.

AUCTIO.

SIR,—Can no remedy be found to purify auction sales, and suppress "knock-out" conspirators, who, by themselves and penniless hirelings, prevent private ladies and poor but honest dealers from buying?

At present I avoid entering into the incompetency of many, who, forsaking their original callings, actually take out licences as general auctioneers, but leave you to imagine how little these persons can possibly know of the value of real and personal property, furniture, or stocks-in-trade, and how their clients' goods must be at the mercy of sharp dealers and bullying brokers. We hear occasionally of the rostrum buying, selling, and money-lending.

Let us now glance at the absurdity of a heavily-furnished house being hammered down in two small rooms. Many buyers are in the front hall, unable to enter or see the auctioneer's eyes, and few inside can glance at or handle the lots. Again, can any auctioneer, however skilled, upright, or strong-nerved, undergo the fearful fatigue of a long sale, the smothering dust of carpets and beds, the stenchy, heated rooms, the jeers and insults, without (from sheer disgust and exhaustion) being occasionally victimised by the low mob surrounding himself and clerk?

The remedy, I think, is easy. Let priced catalogues be issued. Let each lot (priced in plain figures) be on view some days before the auction, to enable professional gentlemen and merchants, before and after office hours, to purchase peaceably, and save the fees wasted on officious commission brokers. This plan would ease the auctioneer's hard wear and tear of brain and body on the auction-sale day, and enable the poor widow or needy owner to realise something approaching fair second-hand value for often-times cherished goods parted with solely through death or debt.

My advice also is, employ only auctioneers bred to the profession,—as a rule, truly honourable men,—and leave prices entirely to their skilled judgment and experience.

Make a small charge for the catalogues sufficient to defray cost of printing, paper, and compiling, otherwise, if gratis, improper parties would ask for and waste them.

W. P. T.

## THE BUILDING TRADE.

SIR,—Will you allow me space to make one or two remarks with reference to a letter that appeared in the *Builder* of the 18th ult., from the firm of Cox & Son, on the dispute in the building trade? I have no doubt the letter was written with the best intentions, but it is certainly calculated to leave wrong impressions, inasmuch as it is made to appear that the delegates are the only obstacle to an amicable settlement of the question. As a delegate representing the joiners of one of the largest firms in London, I do not think it is paying a very high compliment to the intelligence of the men to insinuate that they are prevented from accepting terms that they may deem satisfactory by a professed representative, who is working among and in daily intercourse with them. What the writer is pleased to call professional representatives are real representatives, elected by the men from amongst themselves in their shops and jobs. That the delegates are anxious for an amicable settlement is sufficiently shown by their endeavours to meet the employers by deputation to effect such settlement; but it was refused. Nothing has been done in this movement without the sanction of the men, which the meeting at St. James's Hall sufficiently demonstrated. I am glad to see the firm of Messrs. Cox & Son so far admitted the justice in the claim for a reduction in the hours of labour as to immediately concede two hours and a half per week, with an equivalent advance of wages, with the understanding (I am informed by men in their employ) that they themselves would give the 9d. and nine hours as soon as other firms gave it, and entered into an agreement with the men to that effect.

The memorial referred to as coming from the Joiners' Society is an error, as it emanated from the delegates representing the carpenters and joiners of the principal building firms in London, embracing both society and non-society men, and may fairly be said to represent the collective opinion of the trade.

A DELEGATE.

SIR,—I quite fell in with the remarks of "A. B.," the "Suggester," I found in your valuable paper of the 18th ult. I thought the practice of it would be fair and honourable towards the two classes; namely, those who are for the adoption of the nine-hour system at 9d. or 8½d. per hour, and those (and their name is legion) who advocate that number of hours which we think is a good, safe point of proportion from the minimum to the maximum of the time of labour. Extremes are always dangerous; and, as we approach danger, the higher we go towards the maximum. It is best to stop at ten hours; and that number having been so long in practice, and by working justly towards ourselves and our employers, by the aid also of well-managed machinery, I feel certain (and I have had twenty-nine years of it) that no physical harm can arise from the custom. I am paid 8d. per hour; and, sir, looking at the state of society, the power of capital, the rights of masters, the difficulties of competition through the freedom of importation of joinery, and the low moral tendering for jobs of some capitalists, which places great moral difficulties in the way of high moral capitalists who look to the lasting safety of their firms, I do think that 8d. per hour at my age of forty-nine is a bountiful wage, taking the market value of labour into account. I do not like the idea of the reducing the hours of labour under the plea of (false labour) it is degrading, degenerating, drawing backwards, towards the minimum of time of labour; *and this is the plea* to produce more *labour* for the *unemployed*, at the expense of the capitalist. My fellow-workman in employ may indeed be filled with benevolent feelings towards his poor fellow-man who can get no work to do; but he is not beneficent enough to give 8d. per day, or 4d., to carry out into practice his benevolence. No, no; but he turns round and demands nine hours at 9d. per hour. I must exclaim with a master builder, "The plea is all moonshine!"

If, sir, master builders grant an extra wage of ½d. per hour, with a promise of a future rise, then I think, with the suggester, that it would be fair to the one party and the other to let those go after nine hours or nine hours and a half who please, and those who are for the maintenance of ten hours' work to work that time.

I am certain that all unjust demands upon the employer tend to the injury of the employed. For my own part, I have always experienced goodwill, justice,—indeed, all that was right,—from my masters, and it has been my greatest delight to do all that I possibly could that was just and right between master and man. Do excuse the liberty I have taken. I thought it might cause some to think, and ask themselves, is the demand reasonable, moral, and just?

JOHN ANDREW PARKINSON, Joiner.

SIR,—When will employers of labour take a hint from the acts of their own workmen, and by combining together meet the present strike mania on equal terms?

By an extensive system of amalgamation and mutual support working men are enabled to bring the whole power of their union to bear on any one district, rendering individual opposition impossible. Even the Masters' Associations, as at present constituted, seem powerless to check the growing evil, simply because they have no organisation by which pecuniary support can be extended to the members during the prevalence of a "turn-out." It has occurred to me that the difficulty might be overcome by the establishment throughout the country of a masters' union, which should discuss all matters connected with the labour market, and compensate for losses during a strike against their decision.

If any one will calculate the sum total of the profits made by manufacturers, &c., throughout the country, he would at once perceive that, on the principle of fire insurance, a fractional per-centage only would be necessary to meet all ordinary demands. Each policy would have, however, to be in itself a share to provide for any great strain, and, on the other hand, that it might receive back interest in the shape of dividend.

If this plan were adopted, masters would soon be able to have a word as to the regulations of their workshops, the character of their men or their foremen, the employment of free labour, and the worship of "Mary Ann."

J. J. A.

*** We must let all sides speak; but the banding of class against class has no attraction for us.

SIR,—Will you allow me, by means of your paper, to suggest to the Master Builders' Association the necessity of their making generally known their address, there being a great many builders anxious to become members, who are prevented by the want of this information; and also to say that if the unreasonable demand made by the workmen is to be successfully opposed, it is necessary for the whole of the masters to act in unison, and to close their workshops immediately any firm is selected to be stopped.

A BUILDER.

## STAINING AND VARNISHING.

SIR,—Thanks for your answer last week to my question. Will you please allow me to ask another, viz., Is it a universal practice with architects to allow the work to be *sized* before varnishing, without stating the same in the specifications? Therefore *size* must always be used.

ONE WHO WANTS TO KNOW.

*** Certainly not. If the work is to be thoroughly well done, size ought not to be used.

## OBLIGING.

SIR,—If you can find a corner in your valuable paper for the inclosed, architects will be able to see how obliging their clients are. Is there no remedy for this?

J. H.

"I have architect's plans of a very comfortable house, containing dining, drawing, and four bed rooms, kitchen, scullery, cellar, front and back stairs, cost 500*l.*, which I should be pleased to lend to any reader of *Exchange and Mart*.—W. G."

## THE RESPONSIBILITY OF RAILWAY COMPANIES.

SIR,—No doubt, many of your readers have had considerable experience in the transit, per rail, of materials used in building. Would some one of them kindly say what they find to be the usage of railway companies where a considerable quantity of the goods sent are found *missing* on arrival at their destination,—say one-third,—it being allowed that they were sent at "owner's risk"? Does this entirely exonerate the company from all responsibility? I am specially referring to a case of stoneware pipes being the articles conveyed.

J. D. P.

## COMPENSATION CASE.

A SPECIAL Petty Session has been held at the Police-court, Whitehaven, for the purpose of deciding the amount to be paid as compensation to the Whitehaven Cab and General Posting Company, and to Messrs. Shepherd & Leech, shipbuilders, by the trustees for the town and harbour, for the compulsory sale of a portion of the cab company's premises, and the shipbuilding yard of Messrs. Shepherd & Leech, which are required for the wet dock about to be constructed at Whitehaven.

Mr. McKelvie opened the case on behalf of the Cab Company, who claimed 1,965*l.* 10*s.* 2*d.*, and afterwards called as witnesses, among others, Mr. Wylie, architect, valuer, &c., Liverpool; Mr. Louis Hornblower, architect, valuer, &c., Birkenhead; Mr. H. Hodgson, contractor, Workington; Mr. J. Shepherd, joiner, Whitehaven; and other gentlemen, who gave evidence in support of the claim.

Mr. Howson addressed the magistrates on behalf of the trustees, and then called Messrs. Veevers (of the firm of Myers, Veevers, & Myers, Preston), and Job Bintley,